SHARP SERVICE MANUAL

No. S5037XL-70///

COMPACT disc DIGITAL AUDIO

MICRO COMPONENT SYSTEM

MODEL XL-70

XL-70 Micro Component System consisting of XL-70 (main unit) and CP-XL70U (speaker system).

MODEL XL-70C

XL-70C Micro Component System consisting of XL-70C (main unit) and CP-XL70U (speaker system).

• In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified should be used.

CONTENTS

Page

IMPORTANT SERVICE NOTES (FOR U.S.A. ONLY) 2
SPECIFICATIONS 2
NAMES OF PARTS 3
OPERATION MANUAL 5
DISASSEMBLY 8
REMOVING AND REINSTALLING THE MAIN PARTS 10
ADJUSTMENT 12
TEST MODE 13
ERROR LIST 17
NOTES ON SCHEMATIC DIAGRAM 18
TYPES OF TRANSISTOR AND LED 18
WAVEFORMS OF CD CIRCUIT 19
BLOCK DIAGRAM 20
SCHEMATIC DIAGRAM 24
WIRING SIDE OF P.W.BOARD 30
TROUBLESHOOTING 34
FUNCTION TABLE OF IC 40
LCD SEGMENT 48
PARTS GUIDE/EXPLODED VIEW
PACKING OF THE SET (FOR U.S.A. ONLY)

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

IMPORTANT SERVICE NOTES (FOR U.S.A. ONLY)

BEFORE RETURNING THE AUDIO PRODUCT

(Fire & Shock Hazard)

Before returning the audio product to the user, perform the following safety checks.

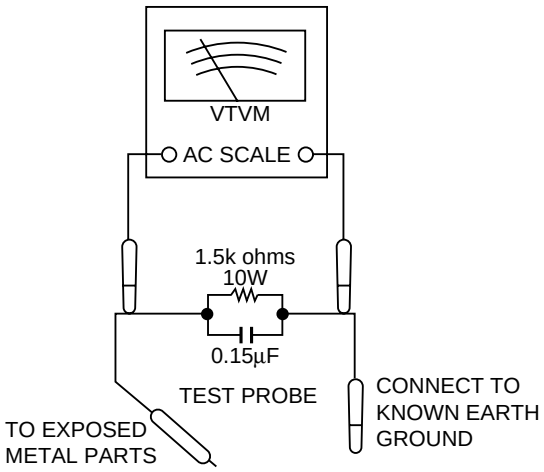
1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the audio product.
2. Inspect all protective devices such as insulating materials, cabinet, terminal board, adjustment and compartment covers or shields, mechanical insulators etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

* Plug the AC line cord directly into a 120 volt AC outlet.

* Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as conduit or electrical ground connected to earth ground.

* Use a VTVM or VOM with 1000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor (See diagram).

* Connect the resistor connection to all exposed metal parts having a return path to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.



All check must be repeated with the AC line cord plug connection reversed.

Any reading of 0.3 volt RMS (this corresponds to 0.2 milliamp. AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the audio product to the owner.

SPECIFICATIONS

XL-70/70C

● General

Power source:	AC 120 V, 60 Hz
Power consumption:	48 W
Dimensions:	Width; 6-5/16" (160 mm) Height; 9-1/2" (241 mm) Depth; 11-3/4" (298 mm)
Weight:	7.9 lbs.(3.6 kg)

● Amplifier section

Output power:	16 watts minimum RMS per channel into 4 ohms from 100 Hz to 20 kHz, 10% total harmonic distortion
Output terminals:	Speakers; 4 ohms Headphones; 16-50 ohms (recommended; 32 ohms) CD digital output (optical) Sub woofer (audio signal); 500 mV/47 k ohms
Input terminals:	Video/Auxiliary (audio signal); 500 mV/47 k ohms

● Compact disc player section

Type:	Compact disc player
Signal readout:	Non-contact, 3-beam semi-conductor laser pickup
D/A converter:	1-bit D/A converter
Filter:	8-times oversampling digital filter
Frequency response:	20 - 20,000 Hz
Wow and flutter:	Unmeasurable (less than 0.001% W. peak)

● Tuner section

Frequency range:	FM; 87.5-108 MHz AM; 530-1,720 kHz

● Cassette deck section

Frequency response:	50 - 14,000 Hz (Normal tape)
Signal/noise ratio:	50 dB
Wow and flutter:	0.25 % (WRMS)

CP-XL70U

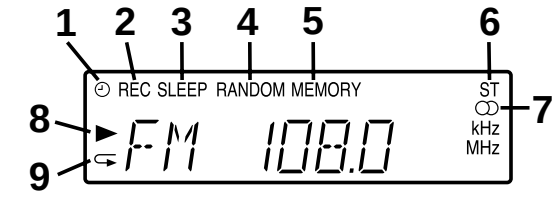
Type:	2-way [4" (10 cm) woofer and 1" (2.5 cm) tweeter]
Rated input power:	20 W
Maximum input power:	40 W
Impedance:	4 ohms
Dimensions:	Width; 6-5/16" (160 mm) Height; 9-1/2" (240 mm) Depth; 7-7/16" (189 mm)
Weight:	5.1 lbs.(2.3 kg)/each

Specifications for this model are subject to change without prior notice.

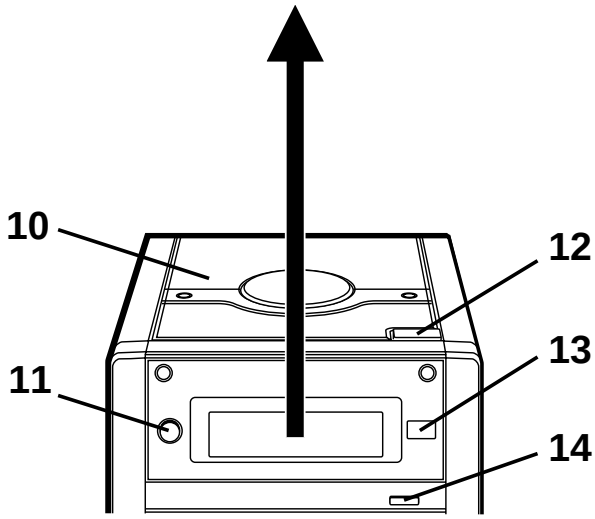
NAMES OF PARTS

XL-70/70C

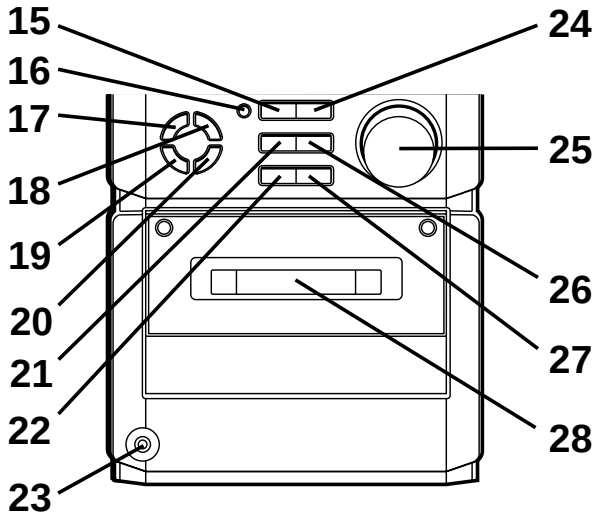
■ Front panel



1. Timer Indicator
2. Record Indicator
3. Sleep Indicator
4. (CD) Random Indicator
5. (CD/TUNER) Memory Indicator
6. FM Stereo Mode Indicator
7. FM Stereo Indicator
8. (CD) Play Indicator
9. (CD) Repeat Indicator

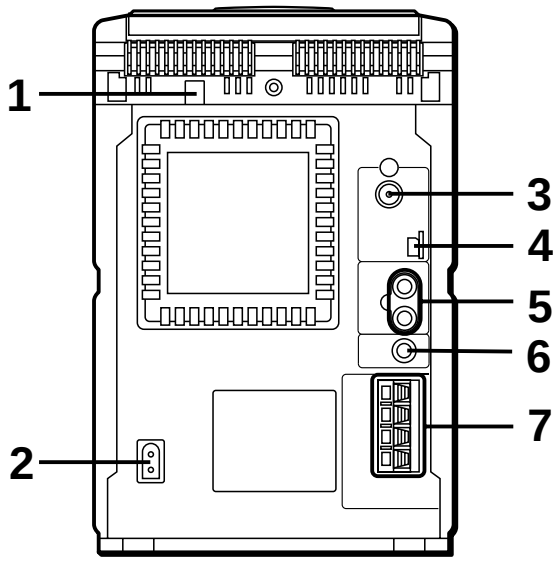


10. CD Compartment
11. Power Button
12. CD Open/Close Button
13. Remote Control Sensor
14. Volume Select Button



15. (CD/TAPE) Stop Button
    (TUNER) Memory Clear Button
16. Record Pause Button
17. Bass/Treble Selector Button
18. Memory/Set Button
19. Clock/Timer/Sleep Button
20. Band Selector Button
21. (CD) Review Button
    (TAPE) Rewind Button
    (TUNER) Tuning Down Button
22. Function Selector Button
23. Headphone Socket
24. (CD) Play/Pause Button
    (TAPE) Play Button
25. Jog Dial
26. (CD) Cue Button
    (TAPE) Fast Forward Button
    (TUNER) Tuning Up Button
27. Volume/Jog Dial Selector Button
28. Cassette Compartment

■ Rear panel

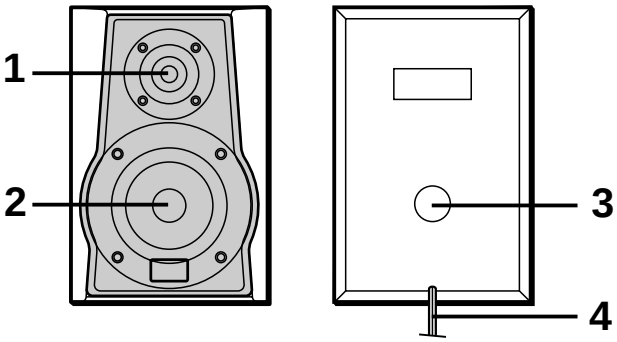


1. CD Digital Output Jack
2. AC Power Input Jack
3. FM 75 Ohms Antenna Jack
4. AM Loop Antenna Input Jack
5. Video/Auxiliary (Audio Signal) Input Jacks
6. Sub Woofer Output Jack
7. Speaker Terminals

XL-70/70C

CP-XL70U

1. Tweeter
2. Woofer
3. Bass Reflex Duct
4. Speaker Wire



XL-70/70C

■ Remote control

1. Remote Control Transmitter LED

● Tuner control section

2. Preset Up/Down Buttons

● CD control section

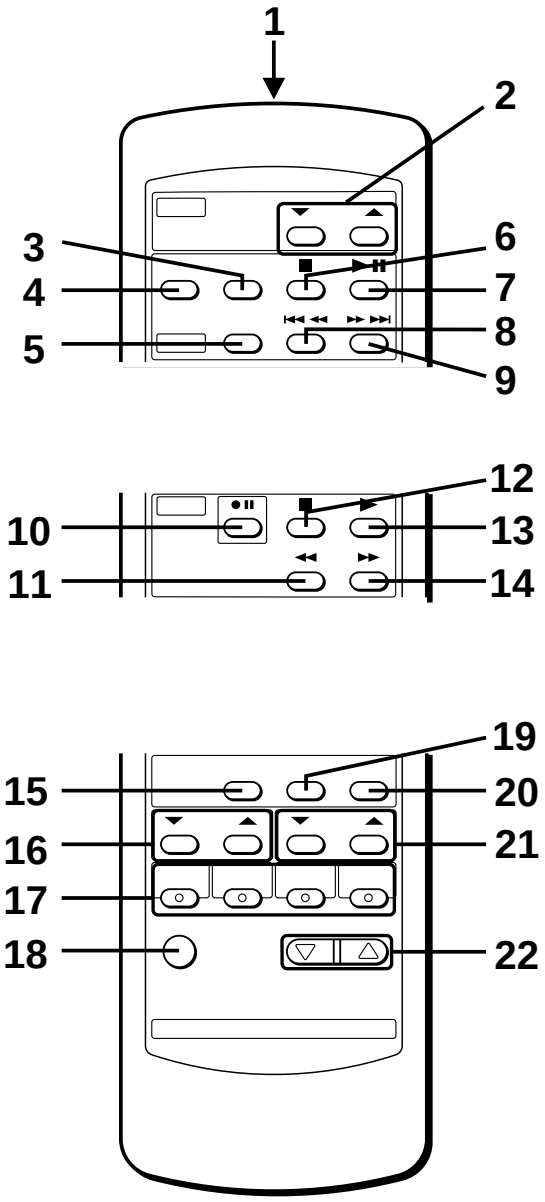
3. Clear Button
4. Random/Repeat Button
5. Memory Button
6. Stop Button
7. Play/Pause Button
8. Track Down/Review Button
9. Track Up/Cue Button

● Tape control section

10. Record Pause Button
11. Rewind Button
12. Stop Button
13. Play Button
14. Fast Forward Button

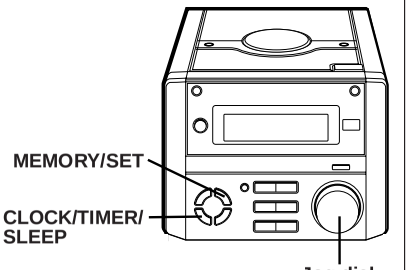
● Common section

15. Sleep Button
16. Bass Up/Down Buttons
17. Function Selector Buttons
18. Power Button
19. Timer Button
20. Clock Button
21. Treble Up/Down Buttons
22. Volume Up/Down Buttons



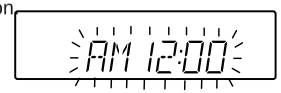
SETTING THE CLOCK

● In this example, the clock is set for the 12-hour (AM 12:00) system.

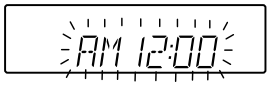


1 Press the CLOCK/TIMER/SLEEP button to enter the time check mode.

2 Within 3 seconds, press the MEMORY/SET button.



3 Turn the jog dial to select the time display mode.

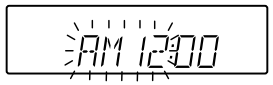


AM 12:00 ⟷ 0:00

"AM 12:00" → The 12-hour display will appear. (AM 12:00 - PM 11:59)
"0:00" → The 24-hour display will appear. (0:00 - 23:59)

● Note that this can only be set when the unit is first installed or it has been reset.

4 Press the MEMORY/SET button.



5 Adjust the hour by turning the jog dial.

● When the jog dial is turned one click clockwise, the time will increase by 1 hour. When it is turned one click counterclockwise, the time will decrease by 1 hour.
Keep turning the jog dial to change the time continuously.
● When the 12-hour display is selected, "AM" will change automatically to "PM".

6 Press the MEMORY/SET button.

7 Adjust the minutes by turning the jog dial.

● When the jog dial is turned one click clockwise, the time will increase by 1 minute. When it is turned one click counterclockwise, the time will decrease by 1 minute.
Keep turning the jog dial to change the time continuously.
● The hour setting will not advance even if minutes advance from "59" to "00".

8 Press the MEMORY/SET button.

● The clock starts operating from "0" second. (Seconds are not displayed.)

Note:
● In the event of a power failure or when the AC power cord is disconnected, the clock display will go out.
When the AC power supply is restored, the clock display will flash on and off to indicate the time when the power failure occurred or when the AC power cord was disconnected.
If this happens, follow the procedure below to change the clock time.

To change the clock time:
Perform steps 1, 2 and 4 - 8 above.

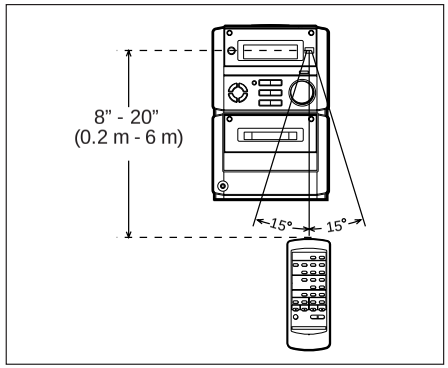
To change the time display mode:

1 Perform steps 1 - 3 in the section "RESETTING THE MICROCOMPUTER".

2 Perform steps 1 - 8 above.

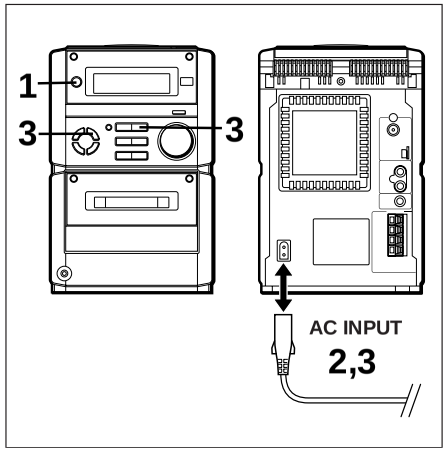
PREPARATION FOR USE

■ Remote control



Notes concerning use:
● Replace the batteries if the operating distance is reduced or if the operation becomes erratic.
● Periodically clean the transmitter LED on the remote control and the sensor on the main unit with a soft cloth.
● Exposing the sensor on the main unit to strong light may interfere with operation. Change the lighting or the direction of the unit.
● Keep the remote control away from moisture, excessive heat, shock, and vibrations.

RESETTING THE MICROCOMPUTER



Reset the microcomputer under the following conditions:
● To erase all of the stored memory contents (clock and timer settings, and tuner and CD presets).
● If the display is not correct.
● If the operation is not correct.

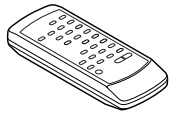
1 Press the POWER button to enter the stand-by mode.

2 Unplug the AC power cord from the AC INPUT jack on this unit.

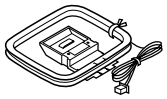
3 Whilst pressing down the MEMORY/SET button and the ► button, plug the AC power cord into the AC INPUT jack on this unit.

Caution:
● The operation explained above will erase all data stored in memory, such as clock and timer settings, and tuner and CD presets.

1 Check the supplied accessories
Compruebe los accesorios suministrados



Remote control × 1
Controlador remoto × 1



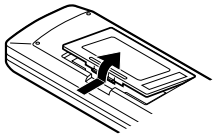
AM loop antenna ×1
Antena de cuadro de AM × 1

FM antenna × 1
Antena de FM × 1

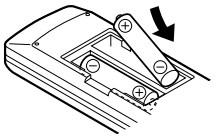
AC power cord × 1
Cable de alimentación de CA × 1

2 Putting batteries into the remote control
Inserción de las pilas en el controlador remoto

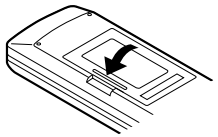
1 Remove the battery cover.
Extraiga la cubierta de las pilas.



2 Insert the batteries.
Inserte las pilas.



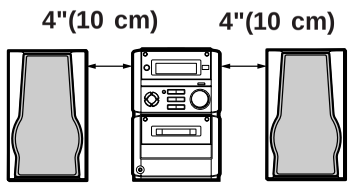
3 Replace the battery cover.
Vuelva a colocar la cubierta.

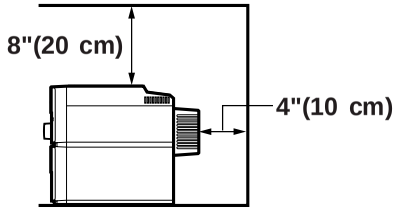


2 "AA" size batteries (UM/SUM-3, R6, HP-7 or similar)
2 pilas del tamaño "AA" (UM/SUM-3, R6, HP-7 or similares)

Batteries are not included.
Las pilas no están incluidas.

3 Placing the system
Instalación del sistema

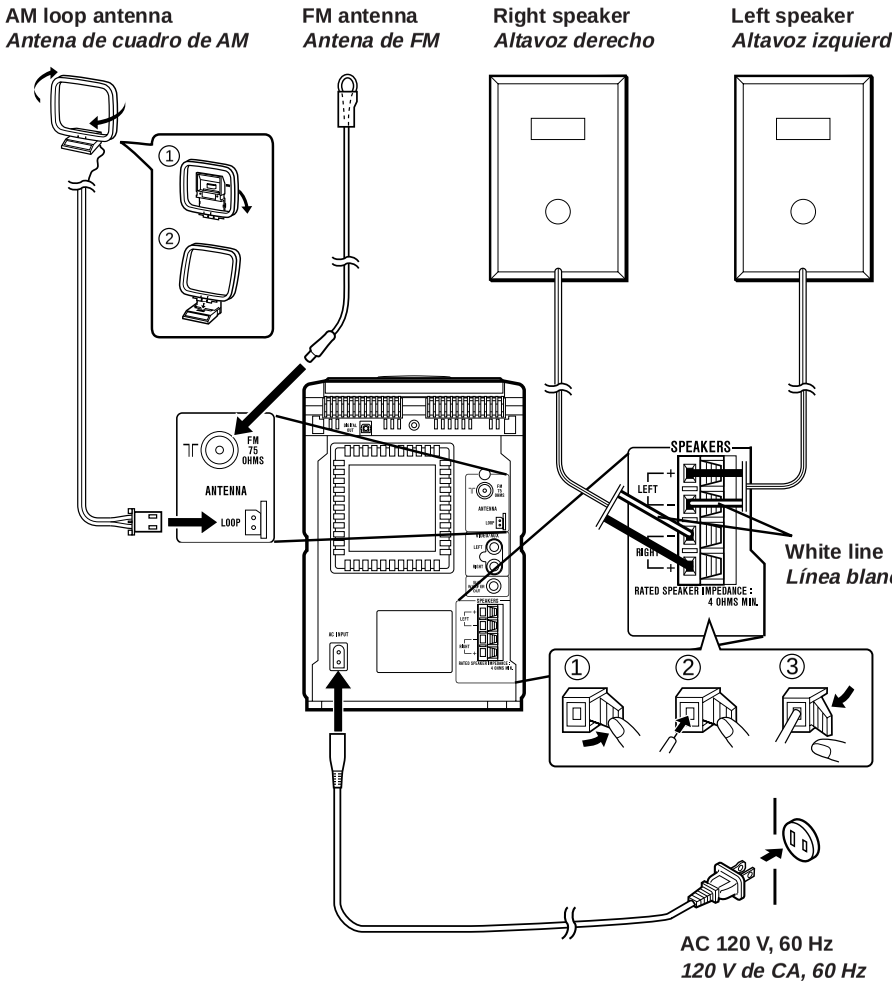




4 Connections
Conexiones

1 Connect the AM and FM antennas.
Conecte las antenas de AM y FM.

2 Connect the speaker system.
Conecte el sistema de altavoces.



3 Connect the AC power cord.
Conecte el cable de alimentación de CA.

5 Listening to a CD
Audición de un disco CD

1 Press the POWER button to turn the power on.
Pulse el botón POWER para conectar la alimentación.

2 Press the FUNCTION button until “CD” or “NO DISC” appears.
Pulse el botón FUNCTION hasta que aparezca “CD” o “NO DISC”.

3 Press the ▲ OPEN/CLOSE button to open the CD compartment.
Pulse el botón ▲ OPEN/CLOSE para abrir el compartimiento del CD.

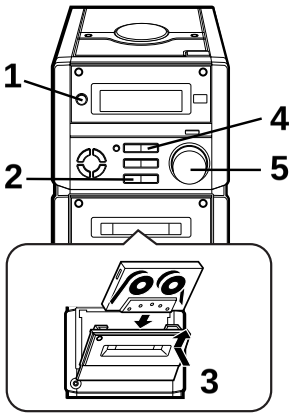
4 Place a CD on the spindle.
Ponga un disco compacto en el eje.

5 Close the CD compartment by pushing the ▲ OPEN/CLOSE button.
Cierre el compartimiento del CD pulsando el botón ▲ OPEN/CLOSE.

6 Press the ►/CD❚❚ button.
Pulse el botón ►/CD❚❚.

7 Adjust the VOLUME control.
Ajuste el control VOLUME.

6 Listening to a tape
Audición de una cinta



1 Press the POWER button to turn the power on.
Pulse el botón POWER para conectar la alimentación.

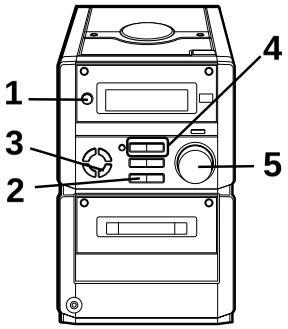
2 Press the FUNCTION button until “TAPE” appears.
Pulse el botón FUNCTION hasta que aparezca “TAPE”.

3 Load a cassette.
Inserte un cassette.

4 Press the ► button.
Pulse el botón ►.

5 Adjust the VOLUME control.
Ajuste el control VOLUME.

7 Listening to the radio
Audición de la radio



1 Press the POWER button to turn the power on.
Pulse el botón POWER para conectar la alimentación.

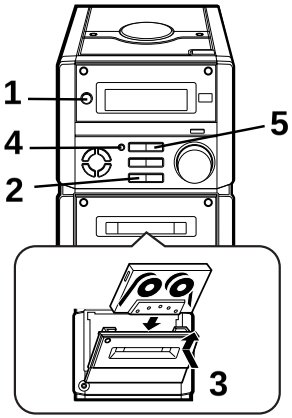
2 Press the FUNCTION button until “FM” or “AM” appears.
Pulse el botón FUNCTION hasta que “FM” o “AM” aparezca.

3 Press the BAND button to select FM ST, FM or AM.
Pulse el botón BAND para seleccionar FM ST, FM o AM.

4 Press the TUNING (∨ or ∧) button to tune into a station.
Pulse el botón TUNing (∨ o ∧) para sintonizar una emisora.

5 Adjust the VOLUME control.
Ajuste el control VOLUME.

8 Recording from a CD
Grabación de un disco CD



1 Press the POWER button to turn the power on.
Pulse el botón POWER para conectar la alimentación.

2 Press the FUNCTION button until “CD” or “NO DISC” appears.
Pulse el botón FUNCTION hasta que aparezca “CD” o “NO DISC”.

3 Load a CD and a recordable cassette.
Inserte un disco compacto y un cassette grabable.

4 Press the REC PAUSE button.
Pulse el botón REC PAUSE.

5 Press the ► button.
Pulse el botón ►.

DISASSEMBLY

Caution on Disassembly

Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep it safe and ensure excellent performance:

1. Take cassette tape and compact disc out of the unit.
2. Be sure to remove the power supply plug from the wall outlet before starting to disassemble the unit.
3. Take off nylon bands or wire holders where they need to be removed when disassembling the unit. After servicing the unit, be sure to rearrange the leads where they were before disassembling.
4. Take sufficient care on static electricity of integrated circuits and other circuits when servicing.

XL-70/70C

STEP	REMOVAL	PROCEDURE	FIGURE
1	Side Panel(Left/Right)	1. Screw ..... (A1) x8	8-1
2	Top Cabinet	1. Screw ..... (B1) x1 2. Socket ..... (B2) x2	8-1
3	Rear Panel	1. Screw ..... (C1) x3 2. Screw ..... (C2) x2	8-1
4	Power Amp. PWB	1. Screw ..... (D1) x1 2. Socket ..... (D2) x2	8-2
5	Main PWB/ Headphones PWB	1. Screw ..... (E1) x3 2. Screw ..... (E2) x2 3. Bracket ..... (E3) x1 4. Socket ..... (E4) x3 5. Flat wire ..... (E5) x1 6. Socket ..... (E6) x1	8-3
6	Jog Switch PWB	1. Socket ..... (F1) x1 2. Screw ..... (F2) x2 3. Knob ..... (F3) x1	8-3
7	Display PWB/ LED PWB (With Jog Motor Holder)	1. Screw ..... (G1) x3 2. Screw ..... (G2) x3 3. Bracket ..... (G3) x1 4. Socket ..... (G4) x1 5. Hook ..... (G5) x2 6. Hook ..... (G6) x2	8-3
8	Front Panel	1. Screw ..... (H1) x1 2. Socket ..... (H2) x1 3. Screw ..... (H3) x1	8-3
9	Power PWB	1. Screw ..... (J1) x4 2. Screw ..... (J2) x1 3. Screw ..... (J3) x1 4. Bracket ..... (J4) x1	8-3
10	Tape Mechanism	1. Open the cassette holder 2. Screw ..... (K1) x4	9-1
11	CD PWB/ Open Close Switch PWB/CD Lid PWB (Note)	1. Screw ..... (L1) x6 2. Socket ..... (L2) x4 3. Hook ..... (L3) x1	9-2
12	Digital Out PWB	1. Socket ..... (M1) x1 2. Screw ..... (M2) x1	9-2
13	CD Mechanism	1. Screw ..... (N1) x3 2. Screw ..... (N2) x3	9-3

Note:

After removing the connector for the optical pickup from the connector, wrap the conductive aluminium foil around the front end of connector remove to protect the optical pickup from electrostatic damage.

XL-70/70C

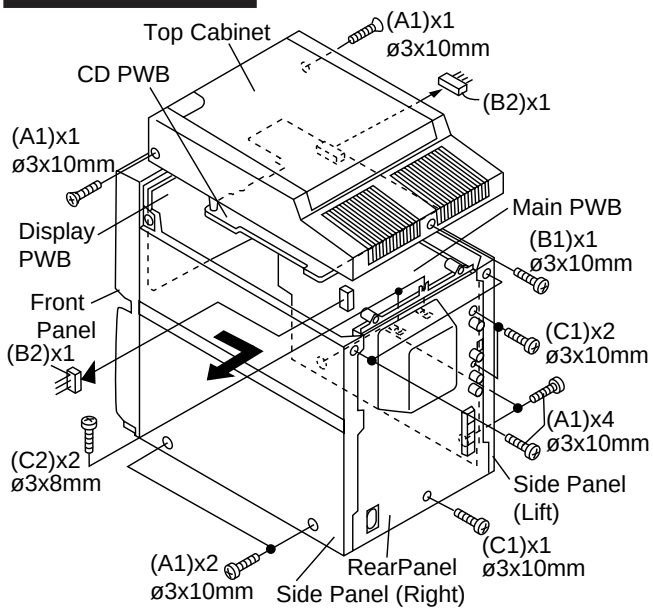


Figure 8-1

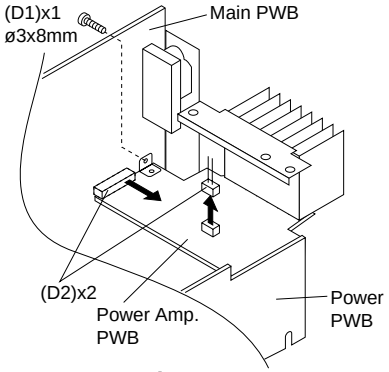


Figure 8-2

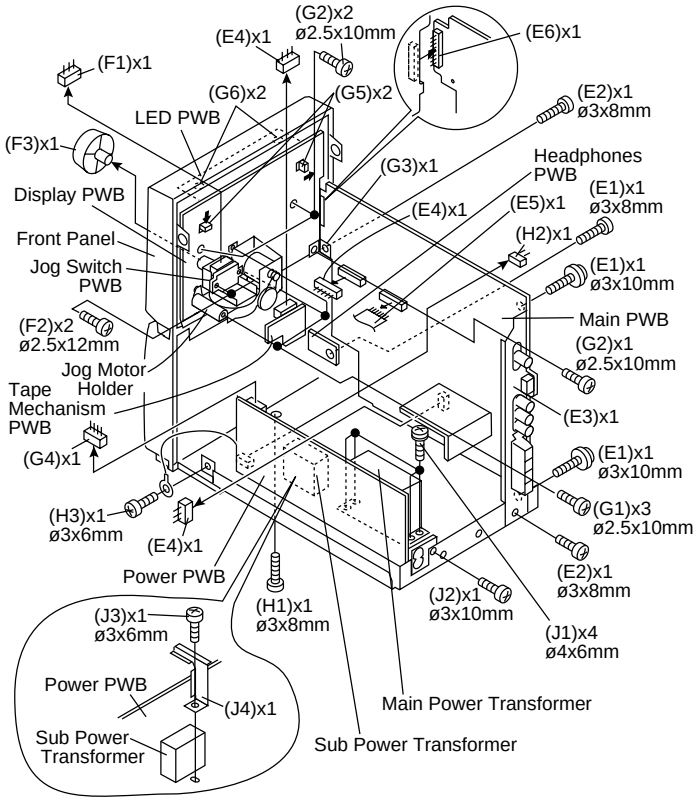


Figure 8-3

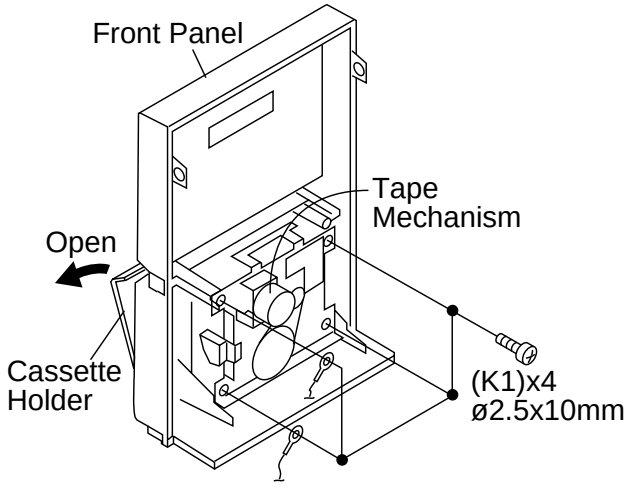


Figure 9-1

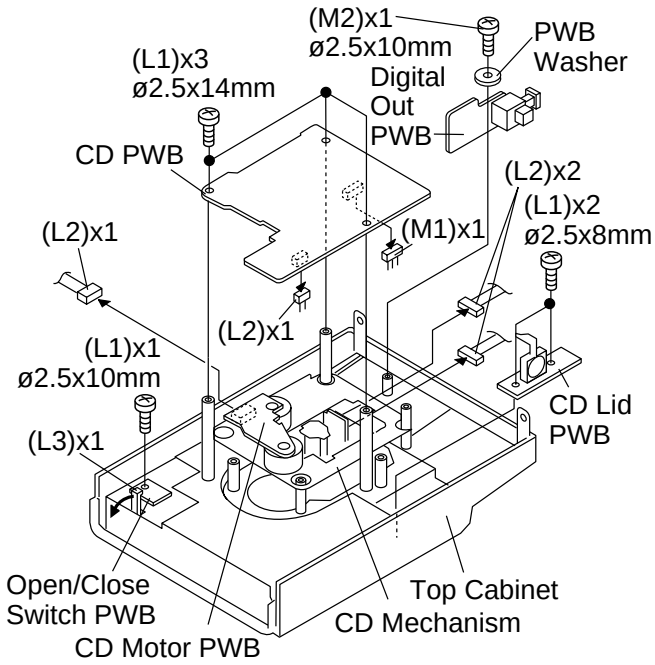


Figure 9-2

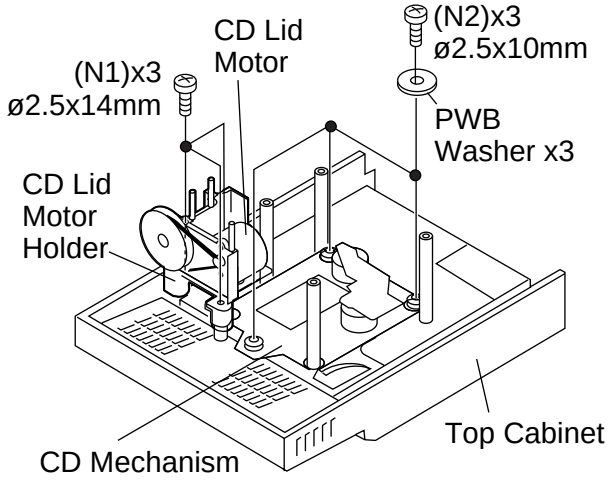


Figure 9-3

CP-XL70U			
STEP	**REMOVAL**	**PROCEDURE**	**FIGURE**
1	Speaker	1. Net Frame ..... (A1) x1 2. Screw ..... (A2) x4 2. Woofer Ring ..... (A3) x1 4. Screw ..... (A4) x4	9-4

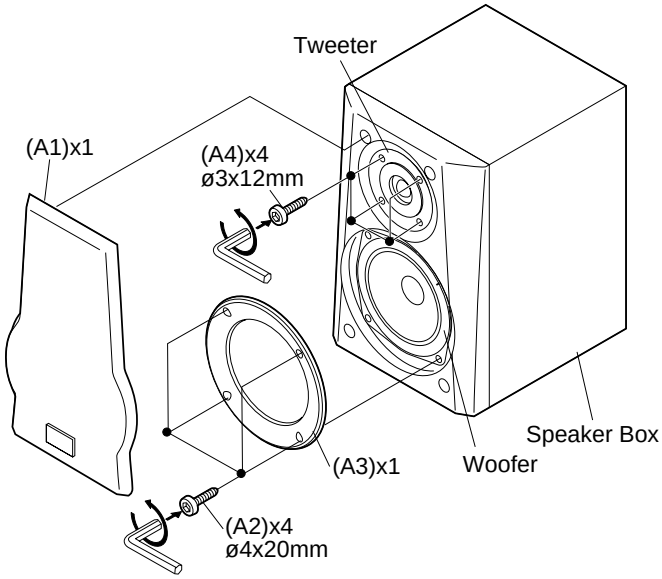


Figure 9-4

REMOVING AND REINSTALLING THE MAIN PARTS

TAPE MECHANISM SECTION

Perform steps 1 to 8 and 10 of the disassembly method to remove the tape mechanism. (See page 8.)

How to remove the record / playback and erase heads (See Fig. 10-1.)

1. Remove the screws (A1) x 2 pcs., to remove the erase head.
2. Remove the screws (A2) x 2 pcs., to remove the record/ playback head.

Note:
After replacing the heads and performing the azimuth adjustment, be sure to apply screwlock.

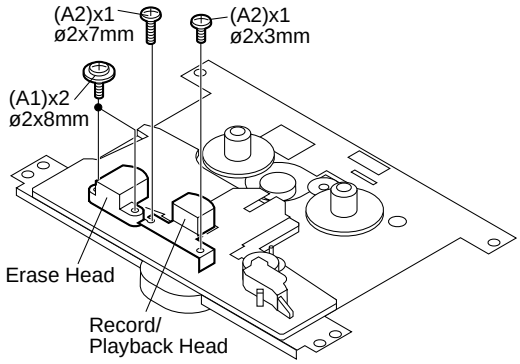


Figure 10-1

How to remove the pinch roller (See Fig. 10-2.)

1. Carefully bend the pinch roller pawl in the direction of the arrow **<A>**, and remove the pinch roller (B1) x 1 pc., upwards.

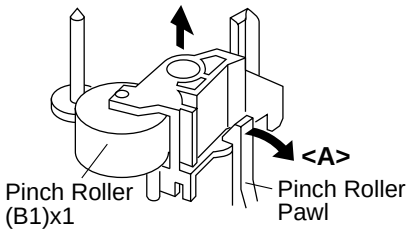


Figure 10-2

How to remove the belts (See Fig. 10-3.)

1. Remove the main belt (C1) x 1 pc., from the motor pulley.
2. Remove the FF/REW belt (C2) x 1 pc., from the REW/FF roller.
3. Put on the belts in the reverse order of removal.

Note:
When putting on the belt, ascertain that the belt is not twisted, and clean it.

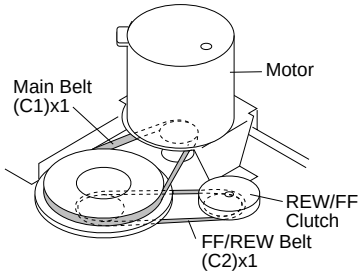


Figure 10-3

How to remove the motor (See Figs. 10-4.)

1. Remove the main belt.
2. Remove the screws (D1) x 2 pcs., to remove the motor bracket.
3. Remove the screws (D2) x 3 pcs., to remove the motor.

Note:
When mounting the motor, pay attention to the motor mounting angle.

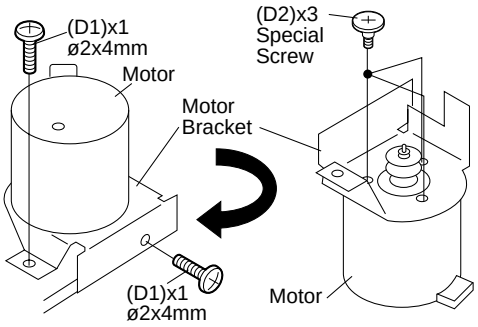


Figure 10-4

How to remove the flywheel (See Fig. 10-5.)

1. Remove the belt.
2. Remove the stop washer (E1) x 1 pc., with a small precision screwdriver to extract the flywheel from the capstan metal.

Note:
When the stop washer is deformed or damaged, replace it with a new one.

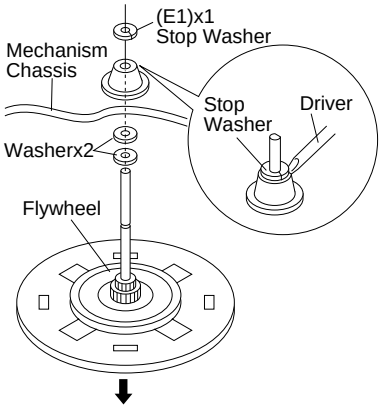


Figure 10-5

How to reinstall the parts

Install each part in the reverse order of the removal with care.

How to remove the tape mechanism PWB (See Fig. 11-1.)

1. Remove the screws (F1) x 1 pc., to remove the tape mechanism PWB.
2. Remove the screws (F2) x 1 pc.
3. Remove the solder joints (F3) x 2 pcs., to remove the tape mechanism PWB.

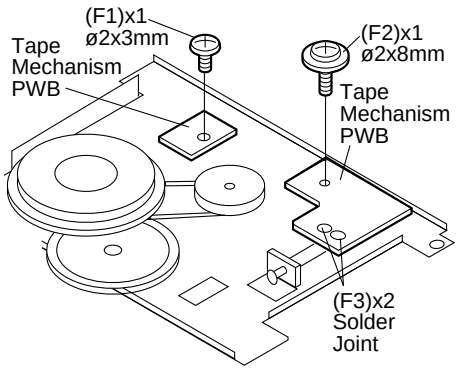


Figure 11-1

How to remove the jog motor (See Figs. 11-2.)

1. Remove the side panel and top cabinet.
2. Remove the jog belt (G1) x 1 pc., from the motor pulley.
3. Remove the screws (G2) x 2 pcs., to remove the jog motor.

Note:
When putting on the belt, ascertain that the belt is not twisted, and clean it.

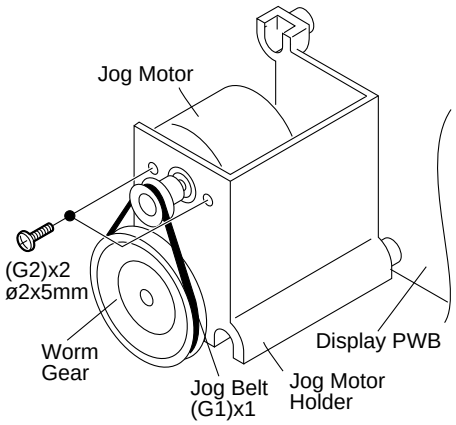


Figure 11-2

How to remove the CD lid motor (See Figs. 11-3.)

1. Remove the CD PWB.
2. Remove the belt (H1) x 1 pc., from the motor pulley.
3. Remove the screws (H2) x 2 pcs., to remove the CD Lid motor.

Note:
When putting on the belt, ascertain that the belt is not twisted, and clean it.

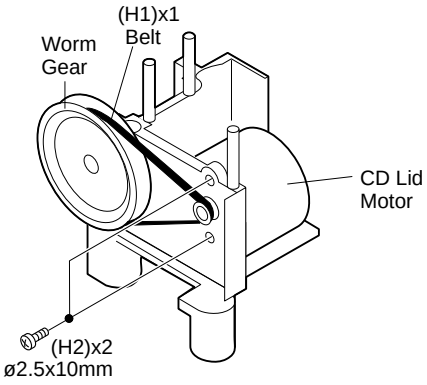


Figure 11-3

CD MECHANISM SECTION

Perform steps 1, 2 and 10 to 12 of the disassembly method to remove the CD mechanism.

How to remove the pickup (See Fig. 11-4)

1. Remove the mechanism cover, paying attention to the pawls (A1) x 4 pcs.
2. Remove the screws (A2) x 2 pcs., to remove the shaft (A3) x 1 pc.
3. Remove the stop washer (A4) x 1 pc., to remove the gear (A5) x 1 pc.
4. Remove the pickup.

Note:
After removing the connector for the optical pickup from the connector, wrap the conductive aluminium foil around the front end of connector remove to protect the optical pickup from electrostatic damage.

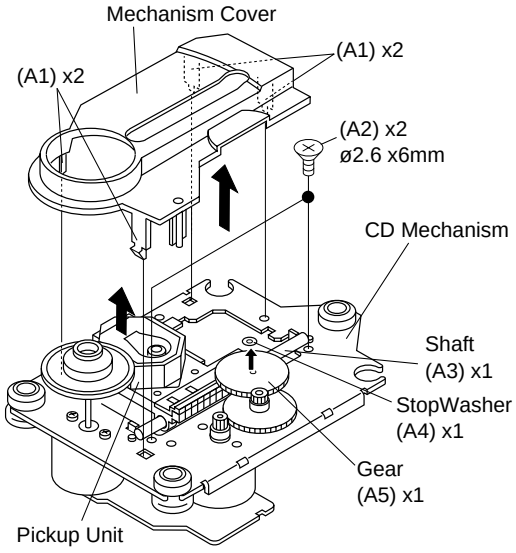


Figure 11-4

ADJUSTMENT

MECHANISM SECTION

• Driving Force Check

Torque Meter	Specified Value
Play: TW-2412	Over 80 g

• Torque Check

Torque Meter	Specified Value
Play: TW-2111	30 to 60 g. cm
Fast forward: TW-2231	55 to 140 g.cm
Rewind: TW-2231	55 to 140 g.cm

• Tape Speed

Test Tape	Adjusting Point	Specified Value	Instrument Connection
MTT-111	Variable resistor in motor.(M901)	3,000 ± 90 Hz	Headphone terminal

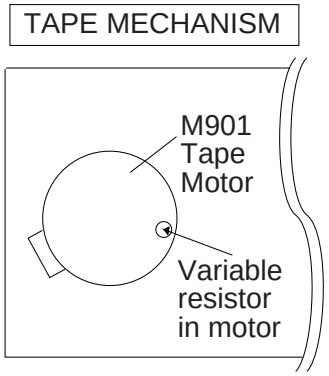


Figure 12-1 ADJUSTMENT POINT

TUNER SECTION

fL: Low-range frequency
fH: High-range frequency

• AM IF/RF

Signal generator: 400 Hz, 30%, AM modulated

Frequency	Frequency	Display	Setting/ Adjusting Parts	Instrument Connection
AM IF	450 kHz	1,620 kHz	T351	*1
AM Band Coverage	—	522 kHz	(fL): T306 1.1 ± 0.1 V	*2
AM Tracking	990 kHz	990 kHz	(fL): T302	*1

*1. Input: Antenna, Output: Speaker Terminal
*2. Input: Input is not connected, Output: TP301

• FM RF

Signal generator: 1 kHz, 75 kHz dev., FM modulated

Test Stage	Frequency	Frequency Display	Setting/ Adjusting Parts	Instrument Connection
FM Band Coverage	—	87.5 MHz	(fL): L303 3.4 ± 0.1 V	*1
FM RF	98.00 MHz (10~30 dB)	98.0 MHz	L302	*2

*1. Input: Antenna, Output: TP301
*2. Input: Antenna, Output: Speaker Terminal

• FM Mute Level

Signal generator: 1 kHz, 40 kHz dev., FM modulated

Frequency	Display	Adjusting Parts	Instrument Connection
98.00 MHz (30 dBμV)	98.00 MHz	VR351*1	Input: SO301 Output: Speaker Terminal

*1. Adjust so that an output signal appears.

• FM Detection

Signal generator: 10.7 MHz, FM sweep generator

Test Stage	Frequency	Frequency Display	Setting/ Adjusting Parts	Instrument Connection
FM IF	10.7 MHz	98.0 MHz	T304(Turn the core of T304 fully counter-clockwise.)	Input: Pin 1 of IC301

• Setting the Test Mode

Keeping the FF/FWD button and MEMORY/SET button pressed, turn on POWER. Then, the frequency is initially set in the memory as shown in Table. Call it with the JOG DIAL knob to use it for adjustment and check of tuner circuit.

Preset No.	FM STEREO	Preset No.	AM
1	87.5 MHz	6	530 kHz
2	108.0 MHz	7	1,720 kHz
3	98.0 MHz	8	990 kHz
4	90.0 MHz	9	600 kHz
5	106.0 MHz	10	1,400 kHz

Preset No.	BAND
11~25	

Preset No.	FM MONO
26	106.0 MHz
27	90.0 MHz
28	98.0 MHz
29	108.0 MHz
30	87.5 MHz

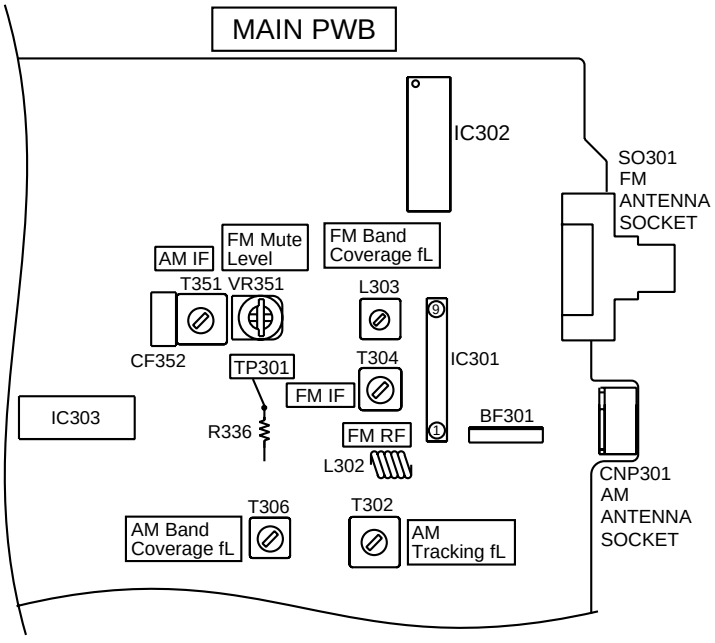


Figure 12-2 ADJUSTMENT POINTS

TEST MODE

The test mode applied to this microcomputer has three modes, namely ordinary test mode to be used for adjustment or measurement, aging test mode to be used for aging test, and self-diagnosis test mode for self-inspection in case of final product inspection.

1. Turning on the test mode

To turn on the specific test mode, press the POWER button, holding down the following two buttons in the ordinary stand-by mode (power off state). In this case only the main unit button is valid. Even when the POWER of remote control button is set to on, the test mode is not turned on.

[Ordinary test mode]

1. CD Test Mode (TEST 1)…… Volume/JOG Dial Selector + FF/FWD
2. Tuner Test Mode (TEST 2)…… Volume/JOG Dial Selector + Volume Select
3. Electronic volume Test Mode (TEST 3)…… REW/REV + FF/FWD
4. Timer Test Mode (TEST 4)…… FUNCTION + Volume Select
5. LCD Test Mode (TEST 5)…… FUNCTION + FF/FWD

[Self-diagnosis Test Mode]

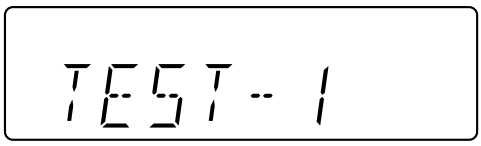
1. Button input diagnosis test mode (TEST6)…. REW/REV + Volume Select

2. CD Test Mode (TEST 1)

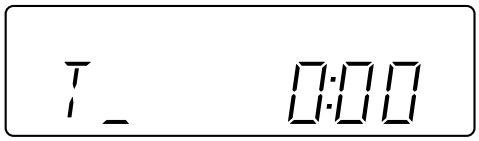
In the CD test mode the operation of each step is enabled even when the LID-SW is off. However, if focus cannot be set in step 3 or any error processing is started, it is impossible to proceed to the next step. When the error processing is started, operations other than termination of test mode by pressing the POWER button or return to the step 1 by pressing the STOP button are inhibited.

1. Step 1 Mode

When the CD test mode is turned on, the following indication lights, the processing (until turning-off of CD STB terminal of CD initialization operation flow) is executed, and the next button input is waited.



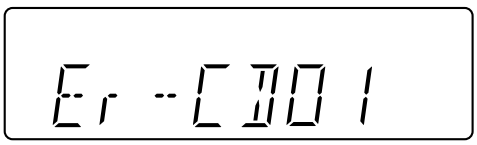
After lighting for one second



If the following operation buttons are pressed in this state, the operation is performed as follows.

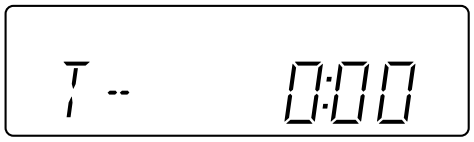
"POWER" ..... The test mode is turned off, the power is turned off, and the ordinary standby mode is set.
"FF/FWD" ..... After the pickup returns once to the innermost periphery, it slides toward the outer periphery while this button is held down.
"REW/REV" ..... After the pickup returns once to the innermost periphery, it slides toward the inner periphery while this button is pressed. However, if PU-IN is on, input is invalid.
"PLAY" ..... Shift to step 2
"STOP" ..... Invalid
"REC PAUSE" ..... Shift to step 5

* In case of initialization the pickup is moved toward the inner periphery. Any buttons other than "POWER" button are not accepted until the shift of pickup to the inner periphery is completed at this time. If PU-IN SW ON cannot be detected within 10 seconds, the slide motor is stopped, and the following error indication appears. Press the POWER button to end the test mode, or press the STOP button to return to step 1. Any other operations are inhibited.



2. Step 2 Mode

When the "PLAY" button is pressed in this mode, the laser lighting command LDON (8400) is sent, and the laser is turned on. Other operations are not performed.

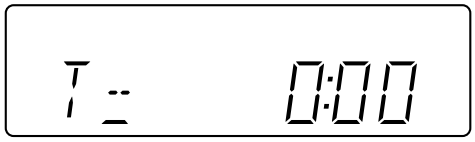


If the following buttons are pressed in this state, the operation is performed as follows.

"POWER" ..... The test mode is turned off, the power is turned off, and the ordinary standby mode is set.
"FF/FWD" ..... The pickup slides toward the outer periphery while this button is held down.
"REW/REV" ..... The pickup slides toward the inner periphery while this button is held down. However, if PU-IN is on, input is invalid.
"PLAY" ..... Shift to step 3
"STOP" ..... Return to step 1
"REC PAUSE" ..... Shift to step 5

3. Step 3 Mode

The laser is kept lighting. The processing (until turning-on of CLV servo of CD initialization operation flow) is executed, and the next button input is waited. (The focus servo is turned on, and focus search is performed.)
The focus search is repeated until the focus is set.

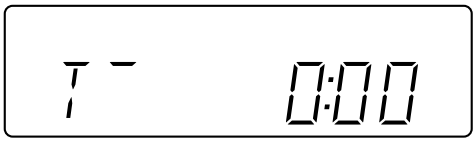


When the following operation buttons are pressed in this state, the operation is executed as follows.

"POWER" ..... The test mode is turned off, the power is turned off, and the ordinary standby mode is set.
"FF/FWD" ..... The pickup slides toward the outer periphery while this button is held down.
"REW/REV" ..... The pickup slides toward the inner periphery while this button is held down. However, if PU-IN is on, input is invalid.
"PLAY" ..... If the focus has been set, shift to step 4 is executed. If the focus has not been set, acceptance is inhibited.
"STOP" ..... Return to step 1
"REC PAUSE" ..... Shift to step 5
*If the focus is disturbed after it has been set, the process returns to step 1.

4. Step 4 Mode

The CLV servo ON command (8600) sending operation is performed, and the next button input is waited. (The disc is rotated to perform CLV locking.)



The time display indicates always "0:00".

When the following buttons are pressed in this state, the operation is executed as follows.

"POWER" ..... The test mode is turned off, the power is turned off, and the ordinary standby mode is set.
"FF/FWD" ..... The pickup slides toward the outer periphery while this button is held down.
"REW/REV" ..... The pickup slides toward the inner periphery while this button is held down. However, if PU-IN is on, input is invalid.
"PLAY" ..... Shift to step 5
"STOP" ..... Return to step 1
"REC PAUSE" ..... Shift to step 5
*If the focus is disturbed, the process returns to step 1.

5. Step 5 Mode

The CD initialization operation flow is executed to the end, the mute is set to off, and playback is started. Even when the playback reaches the outermost periphery of disc, the operation does not stop. The LCD display indicates the playback past time as in case of ordinary CD playback.

When the following operation buttons are pressed in this sate, the operation is executed as follows.

"POWER" ..... The test mode is turned off, the power is turned off, and the ordinary standby mode is set.
"FF/FWD" ..... The pickup slides toward the outer periphery while this button is held down.
"REW/REV" ..... The pickup slides toward the inner periphery while this button is held down. However, if PU-IN is on, input is invalid.
"PLAY" ..... Invalid
"STOP" ..... Return to step 1
*If the focus is disturbed, the process returns to step 1.

Other cautions
• TOC IL is not executed in the test mode.
• As for button operations other than those shown above, only the sound volume operation (with JOG) is accepted.

3. Tuner Test Mode (TEST 2)

1. Outline of tuner (radio) test mode

The tuner test mode is intended to store the adjustment and measurement frequencies in the preset memory CH without frequency setting by adjusting personnel when the tuner section is adjusted in the production line.

2. Details of tuner test mode

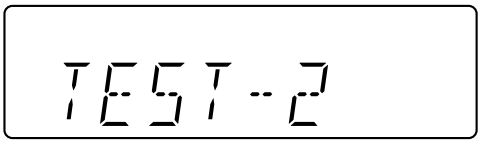
When the power is turned on by using the "POWER" button while the "Volume/JOG Dial Selector" and "Volume Select" buttons are held down in POWER OFF state, the frequency for adjustment and measurement of destination specified by the AREA terminal is preset and stored in the preset memory CH. However, Ordinary 1 and Ordinary 2 are set to the designation (destination selected by SPAN switching operation) set when the test mode is set. (As for frequencies to be preset and stored for each destination, refer to item 3.)

The tuner test mode is started from preset No.1.

The operations of test mode are identical with the ordinary operations of TUNER function. However, FUNCTION switching is invalid.

Since it is necessary to discard the content of preset memory when the tuner test mode is ended, "0000" or "1111" bits are written in the memory to be checked in case of memory check (in case of initial setting) so that memory abnormality is detected in case of initial setting so as to ensure memory initialization.

When the tuner test mode is turned on, the following indication lights for one second.



• The TUNER TEST2 mode is set as a result of Volume Select + POWER. -> IF AC is set to OFF in the TEST2 mode, the initial state is restored.

↓

When POWER is set to OFF, the memory of TEST2 mode is protected.
When the power is turned on again, the ordinary operation is enabled while the data is stored in the memory (besides TUNER).

↓

If AC OFF state is maintained in this state for about 1/2 day, start is executed in the initial state.

• To clear the whole memory, insert the AC cord, holding down MEMORY + PLAY.

3. Preset frequencies for various destinations (random preset memory)

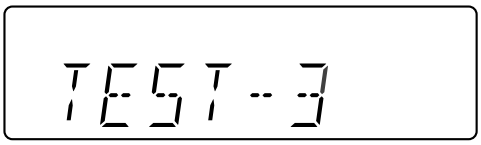
CH	BAND	U.S.A. ,Brazil
1	FM STEREO	FM 87.5 MHz
2		FM108.0 MHz
3		FM 98.0 MHz
4		FM 90.0 MHz
5		FM106.0 MHz
6	AM	AM 530 kHz
7		AM1720 kHz
8		AM 990 kHz
9		AM 600 kHz
10		AM1400 kHz
11	LW	
12		
13		
14		
15		

CH	BAND	U.S.A. ,Brazil
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26	FM MONO	FM106.0 MHz
27		FM 90.0 MHz
28		FM 98.0 MHz
29		FM108.0 MHz
30		FM 87.5 MHz

• The hatched sections of the table are not stored in memory.

4. Electronic volume Test Mode (TEST 3)

When the test mode is set, the following indication lights for one second.



When this mode is set, BASS/TREBLE is set to 0 (0 dB) and SURROUND mode is set to off, and start-up function is set to CD when volume is -14 dB (STEP 17). The button operations in the test mode are the same as those of ordinary operation excepting sound volume UP/DOWN.

(1) The indication is the same as that of ordinary operation excepting test mode setting.

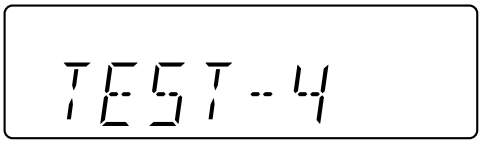
(2) The sound volume control with the sound volume UP/DOWN button is only the following 3 steps unlike the ordinary state.

Volume- ∞ (STEP 0) <-> Volume-14 dB (STEP 23) <-> Volume-0 (STEP 30)

(3) BASS/TREBLE and SURROUND are switched when button operation is performed.

5. Timer test Mode (TEST 4)

When the test mode is set, the following indication lights for one second.

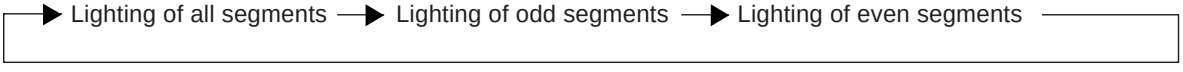


The current time and timer time are set in the following procedure to perform the timer playback.

1.Set the current time to 1:00, set the timer to ON time 1:02, set the function to Tape, and set volume STEP 8. One minute is counted as one second, and the timer playback operation is performed. The fade-in (when playback is started) is executed at a rate of one step for 0.5 sec. After completion of fade-in the fade-out is executed at a rate of one step for 0.5 sec (WAIT 1 sec inserted). After completion of fade-out the power is turned off (after WAIT 1 sec), and the mode is changed to the standby mode.
The indication during operation is the same as that of ordinary timer operation.

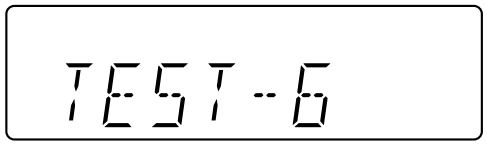
6. LCD Test Mode (TEST 5)

When the LCD test mode is set, all the LCD segments are lighted. After that the indication is changed as follows according to the "PLAY" button input.



7. Key input diagnosis Test Mode (TEST 6)

When the test mode is set, the following indication appears.



This test mode is intended to check whether all the main unit buttons can be detected. Accordingly, in this test mode checking as to whether the "POWER" button was pressed after all the buttons shown below were pressed is performed. If the result is OK, OK is indicated. Even any one of keys was not pressed, an error is indicated. In case of OK termination or error termination exit from this mode occurs when the "POWER" button is pressed next time, and the standby mode is set.

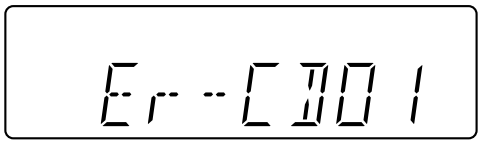
1. In case of "Review" + "Volume/Jog Dial Select Button"

The following 13 buttons are detected as all buttons.

The OK/NG indication of test result is as follows.

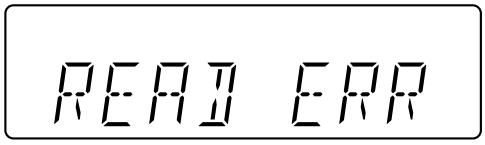
ERROR LIST

PU-IN SW detection error



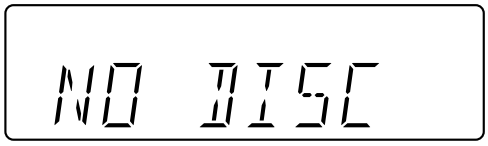
Error content ..... The detection SW cannot detect ON after a fixed period of time even if the microcomputer controls the CD pickup to return to the innermost position.
Probable cause ..... Defective or poorly connected PU-IN SW or slide motor.
Action ..... Solve the problem and turn on the power again.

CD read error



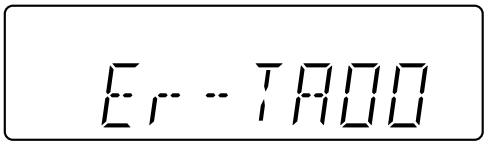
Error content ..... Disc data cannot be read properly or even if it can be read, the disc is not a playable one.
Probable cause ..... The disc is loaded upside down, not CD-DA, scratches, stains, etc.
Action ..... Open the CD lid, then reload the disc correctly. Remove the scratches or stains on the disc.

NO DISC



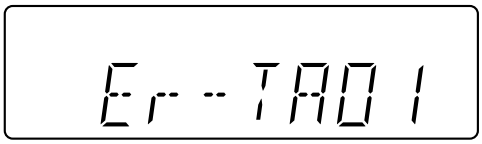
Error content ..... Focusing is impossible.
Probable cause ..... The disc is loaded upside down, not CD-DA, scratches, stains, etc.
Action ..... Open the CD lid, then reload the disc correctly. Remove the scratches or stains on the disc.

Tape mechanism error 1



Error content ..... The detection SW "CAM-SW" cannot detect ON (mechanism in operation) even if the motor and solenoid are controlled to play back, fast forward, rewind, or record the tape.
Probable cause ..... Mechanism is in operation when this message appears: Defective or poorly connected CAM-SW. Mechanism stops: Defective or poorly connected motor or solenoid.
Action ..... Solve the problem and turn on the power again.

Tape mechanism error 2



Error content ..... Initialization cannot be completed when the microcomputer controls the motor and solenoid to initialize the tape mechanism (to set the mechanism to the stop mode). The detection SW "CAM-SW" cannot detect OFF While the mechanism is in operation.
Probable cause ..... Mechanism is in operation when this message appears: Defective or poorly connected CAM-SW. Mechanism stops: Defective or poorly connected motor or solenoid.
Action ..... Solve the problem and turn on the power again.

NOTES ON SCHEMATIC DIAGRAM

- Resistor:
  To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with “Fusible” is a fuse type.
- Capacitor:
  To indicate the unit of capacitor, a symbol P is used: this symbol P means micro-micro-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression “capacitance/withstand voltage” is used.
  (CH), (TH), (RH), (UJ): Temperature compensation
  (ML): Mylar type
  (P.P.): Polypropylene type
- Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.
- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.
  1. In the tuner section,
     ( ) indicates AM
     < > indicates FM stereo
  2. In the main section, a tape is being played back.
  3. In the deck section, a tape is being played back.
     ( ) indicates the record state.
  4. In the power section, a tape is being played back.
  5. In the CD section, the CD is stopped.
- Parts marked with “ ⚠ ” (⊏ ニ ニ ニ ⊐) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

REF. NO	DESCRIPTION	POSITION
NSW801	PICKUP IN	ON—OFF
SW700	JOG	ON—OFF
SW709	ON/STAND-BY	ON—OFF
SW710	CLOCK/TIMER/SLEEP	ON—OFF
SW711	TUNING UP	ON—OFF
SW712	PLAY/CD PAUSE	ON—OFF
SW713	VOLUME SELECT	ON—OFF
SW721	MEMORY/SET	ON—OFF
SW722	BASS/TREBLE	ON—OFF
SW723	BAND	ON—OFF

REF. NO	DESCRIPTION	POSITION
SW724	REC. PAUSE	ON—OFF
SW725	STOP/CLEAR	ON—OFF
SW726	TUNING DOWN	ON—OFF
SW727	FUNCTION	ON—OFF
SW728	VOLUME JOG	ON—OFF
SW730	CD LID OPEN/CLOSE	ON—OFF
SW802	CD LID	ON—OFF
SW901	FOOL PROOF	ON—OFF
SW902	CAM	ON—OFF

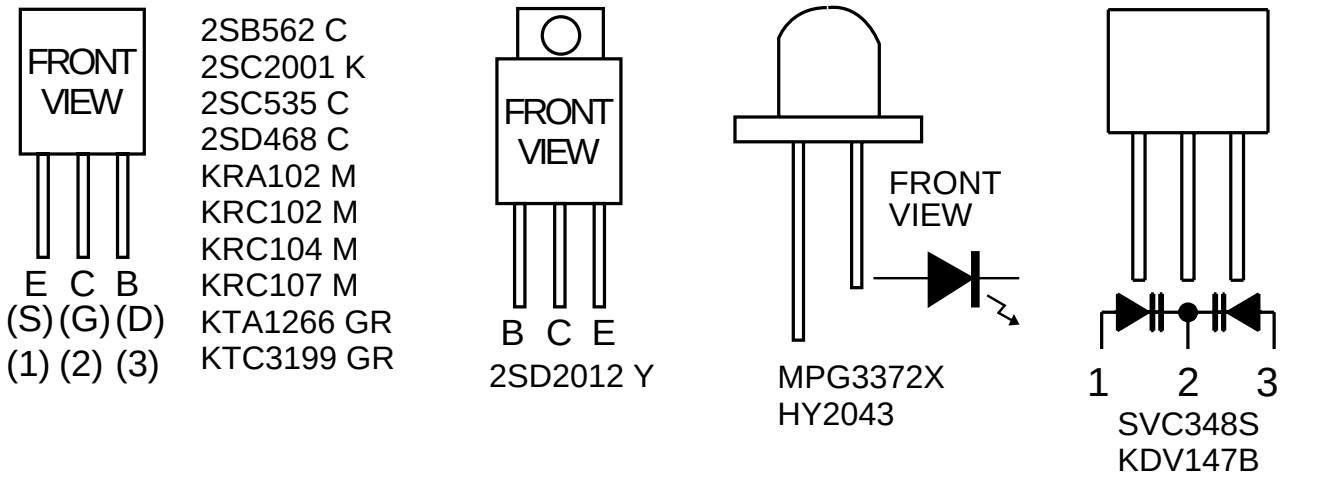
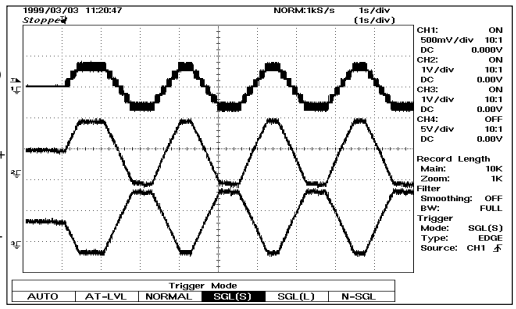


Figure 18 TYPES OF TRANSISTOR AND LED

WAVEFORMS OF CD CIRCUIT

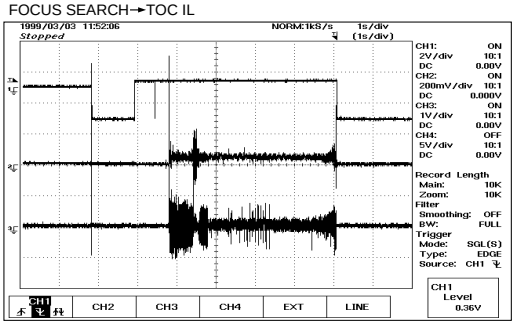
NO DISC FOCUS SEARCH

1 FOO — IC802 48pin
2 FO+ — IC804 26pin
3 FO- — IC804 25pin



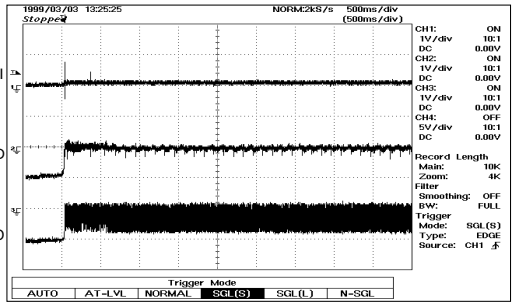
FOCUS SEARCH→TOC IL

4 SEL — IC802 57pin
5 FEI — IC802 43pin
6 TEI — IC802 46pin



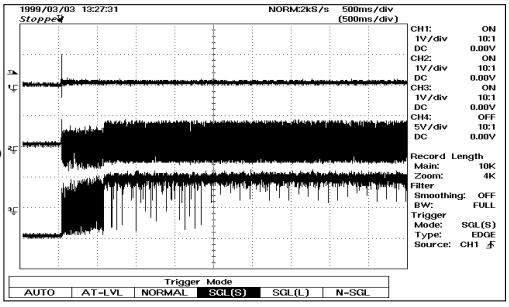
STOP→PLAY

5 FEI — IC802 43pin
7 SBAD — IC802 44pin
8 RFO — IC801 22pin



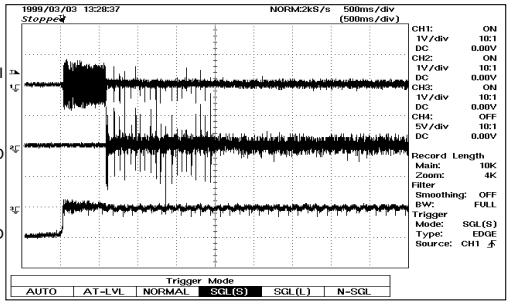
STOP→PLAY

5 FEI — IC802 43pin
9 RFGO — IC801 19pin
10 RFRP — IC801 17pin



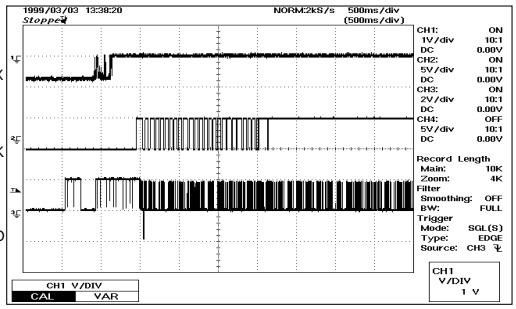
STOP→PLAY

6 TEI — IC802 46pin
11 TRO — IC802 49pin
7 SBAD — IC802 44pin



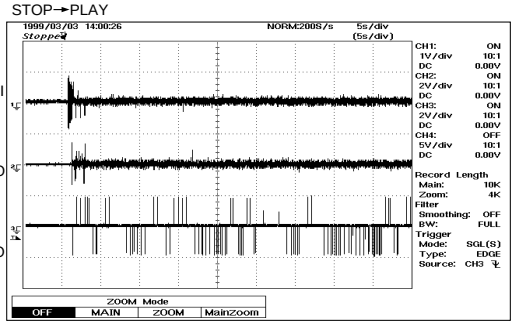
STOP→PLAY

12 TMAX — IC802 30pin
13 SBOK — IC802 12pin
14 DMO — IC802 55pin



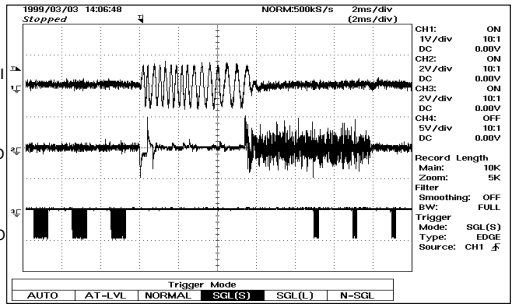
STOP→PLAY

6 TEI — IC802 46pin
11 TRO — IC802 49pin
15 FMO — IC802 53pin



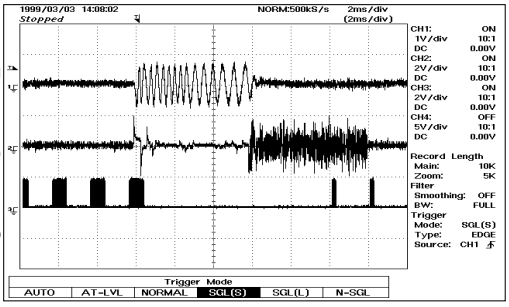
CUE

6 TEI — IC802 46pin
11 TRO — IC802 49pin
15 FMO — IC802 53pin



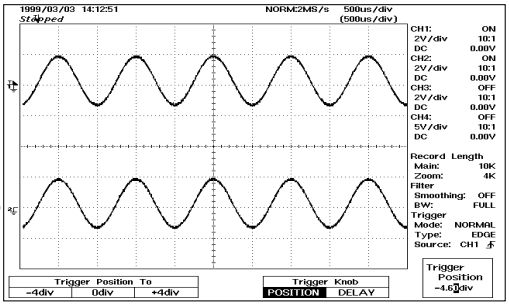
REVIEW

6 TEI — IC802 46pin
11 TRO — IC802 49pin
15 FMO — IC802 53pin



TCD-782 TNO-02 PLAYBACK

16 LO — IC802 85pin
17 RO — IC802 82pin



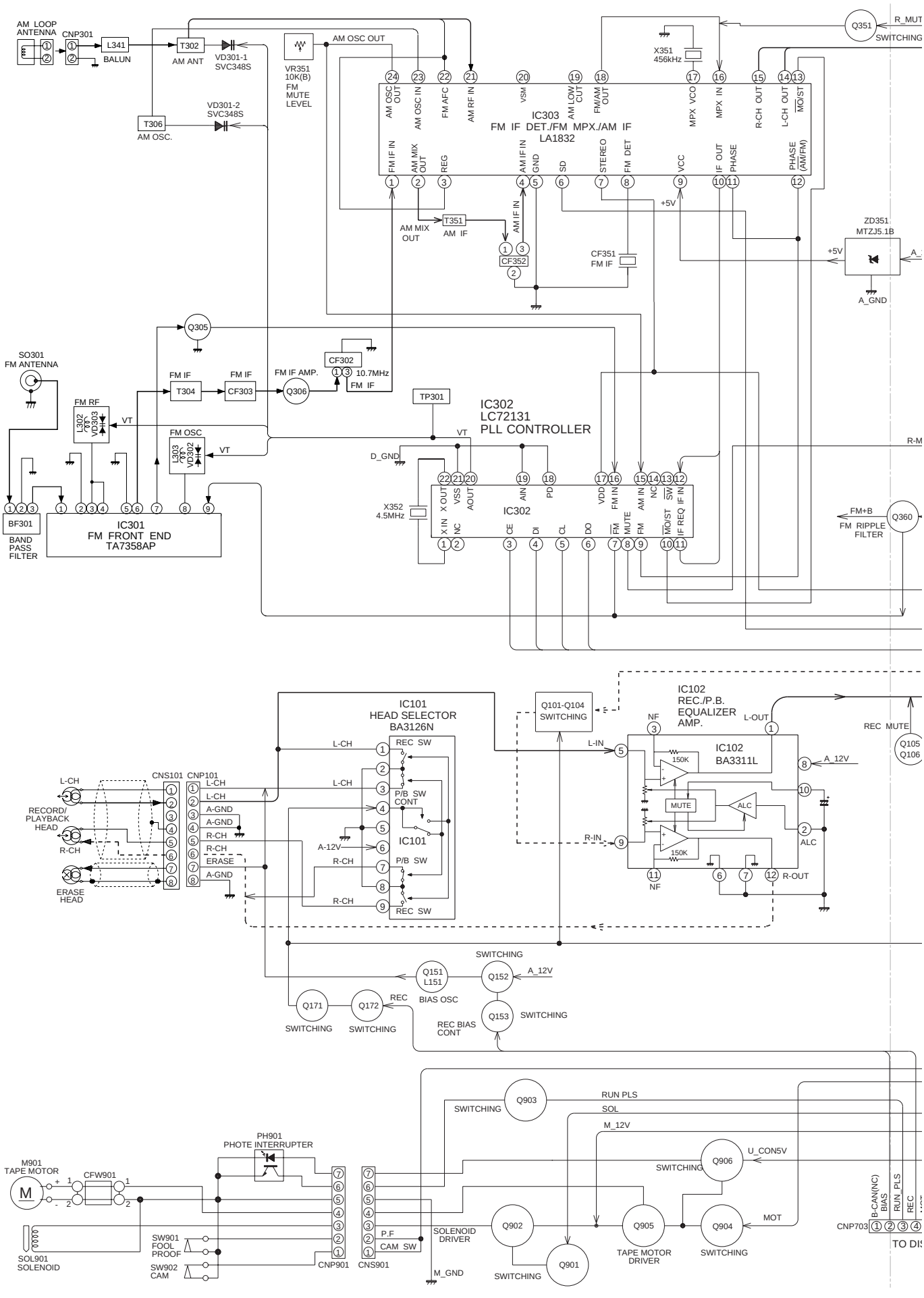


Figure 20 BLOCK DIAGRAM (1/4)

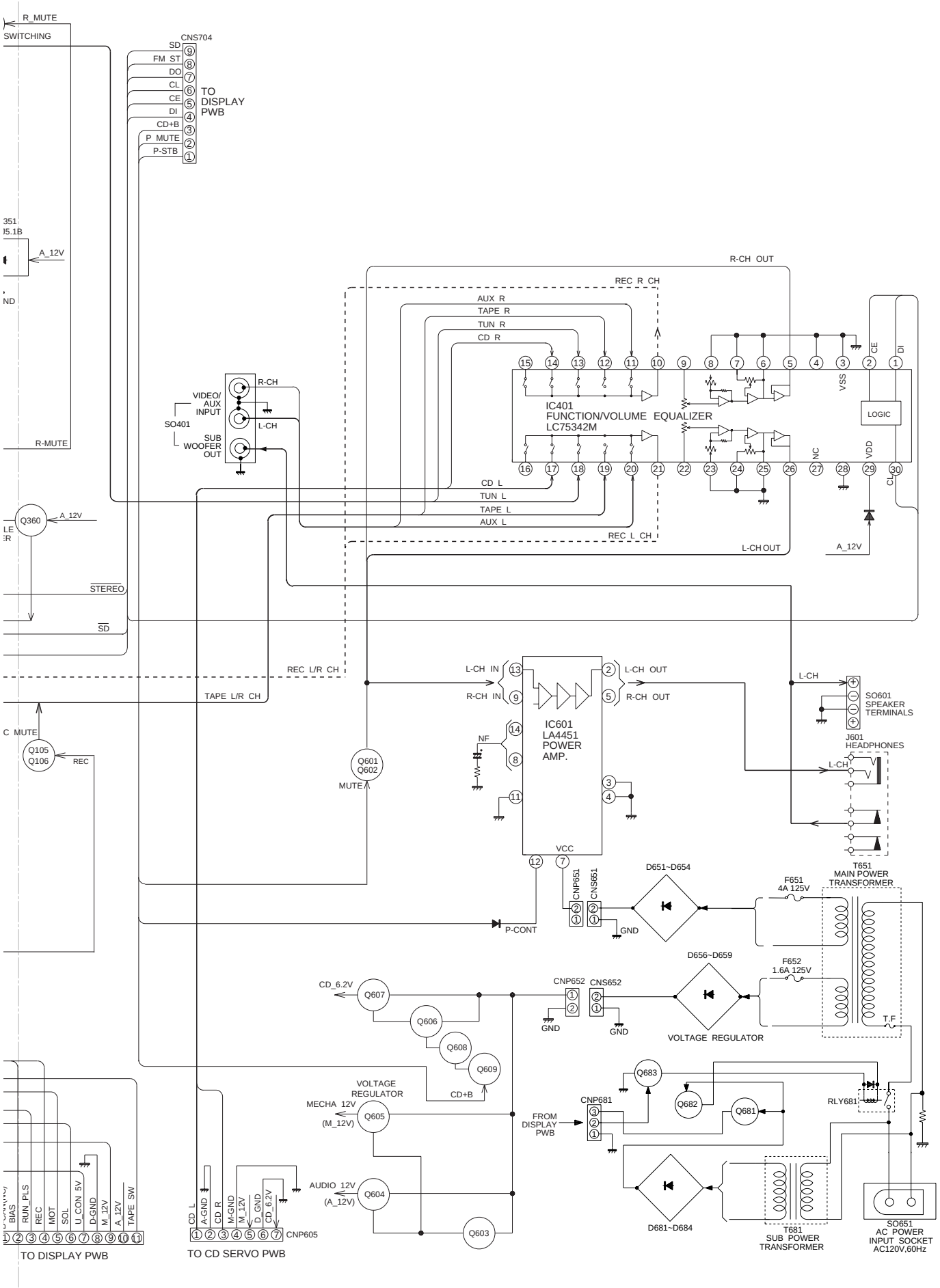


Figure 21 BLOCK DIAGRAM (2/4)

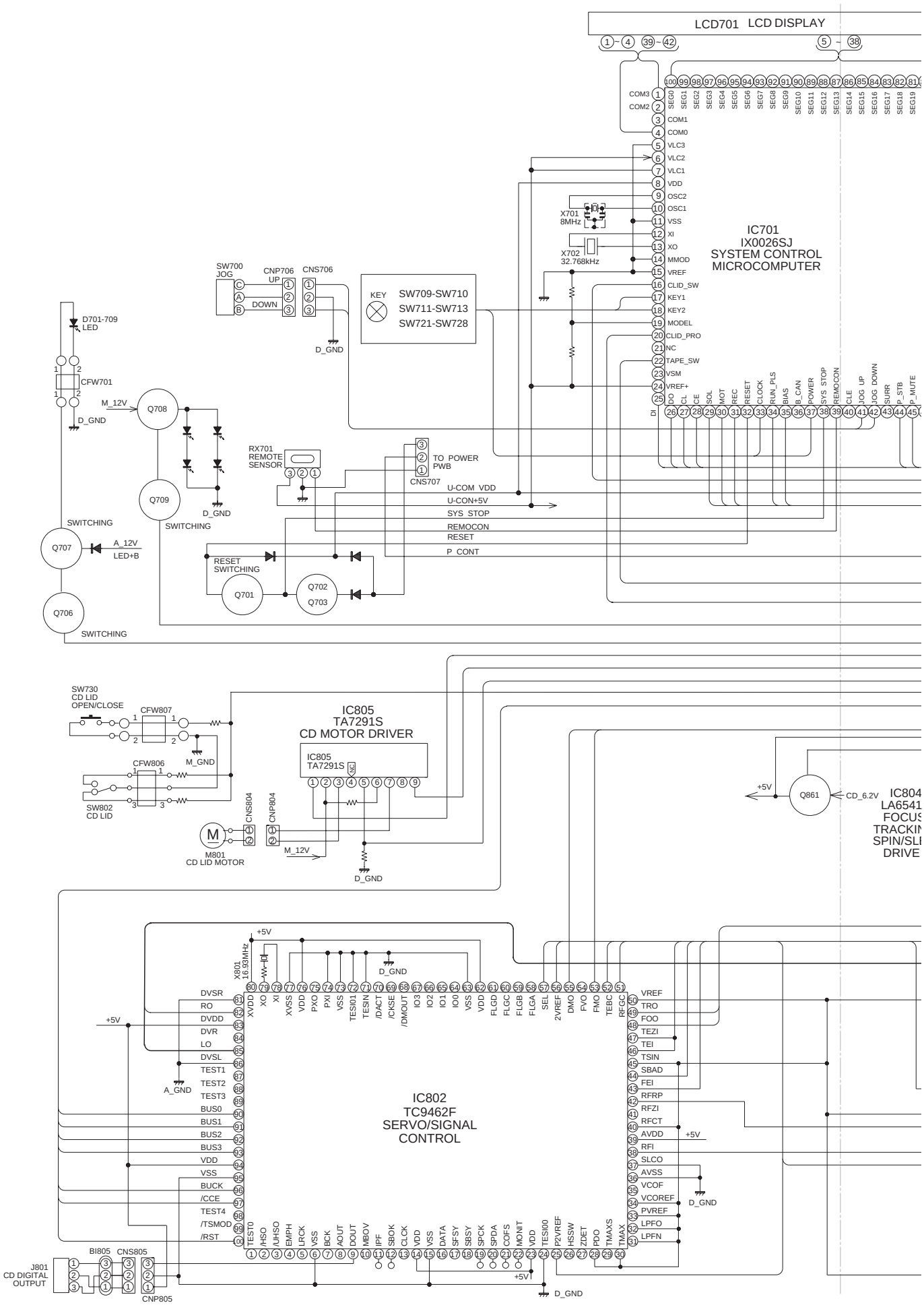


Figure 22 BLOCK DIAGRAM (3/4)

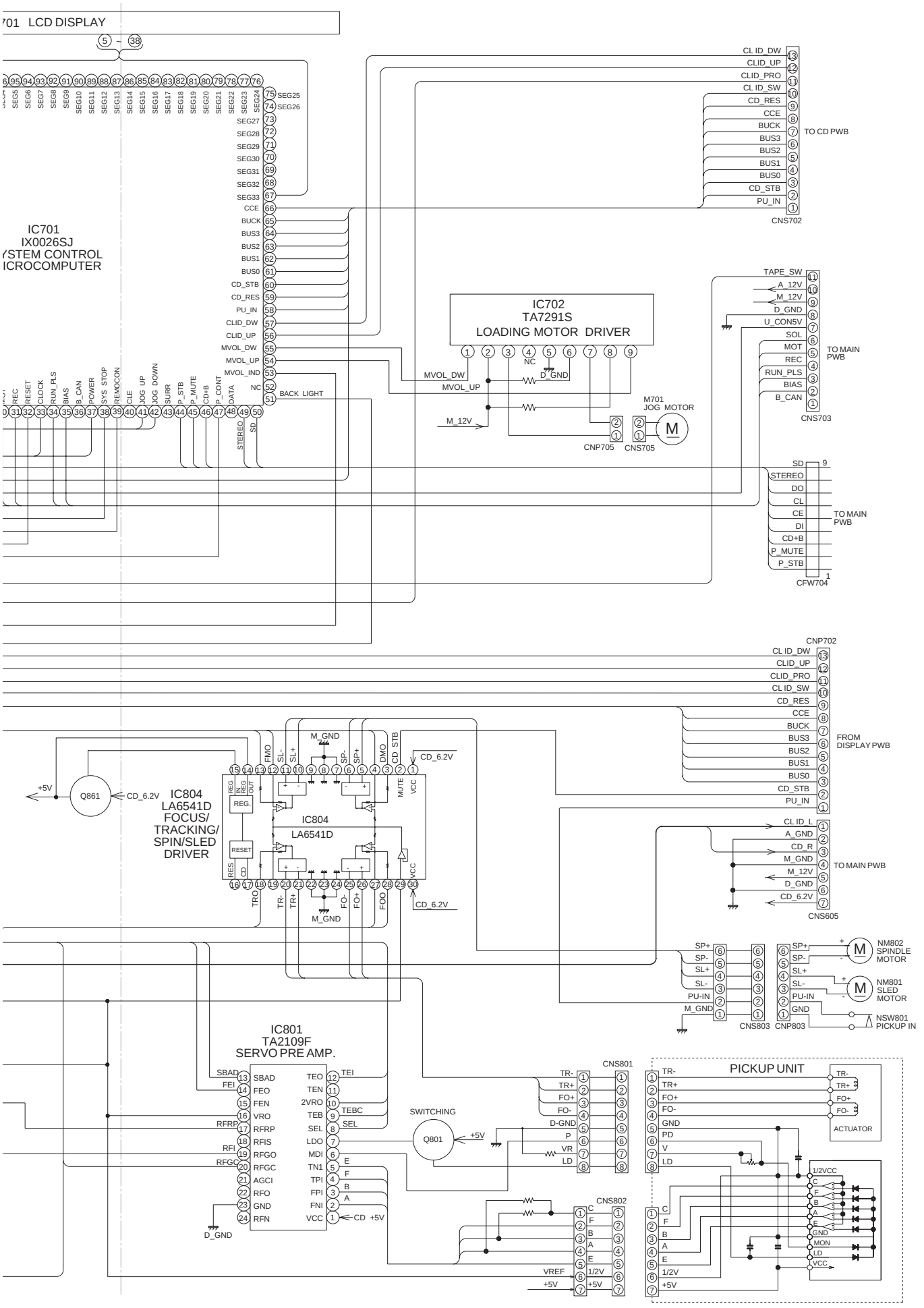
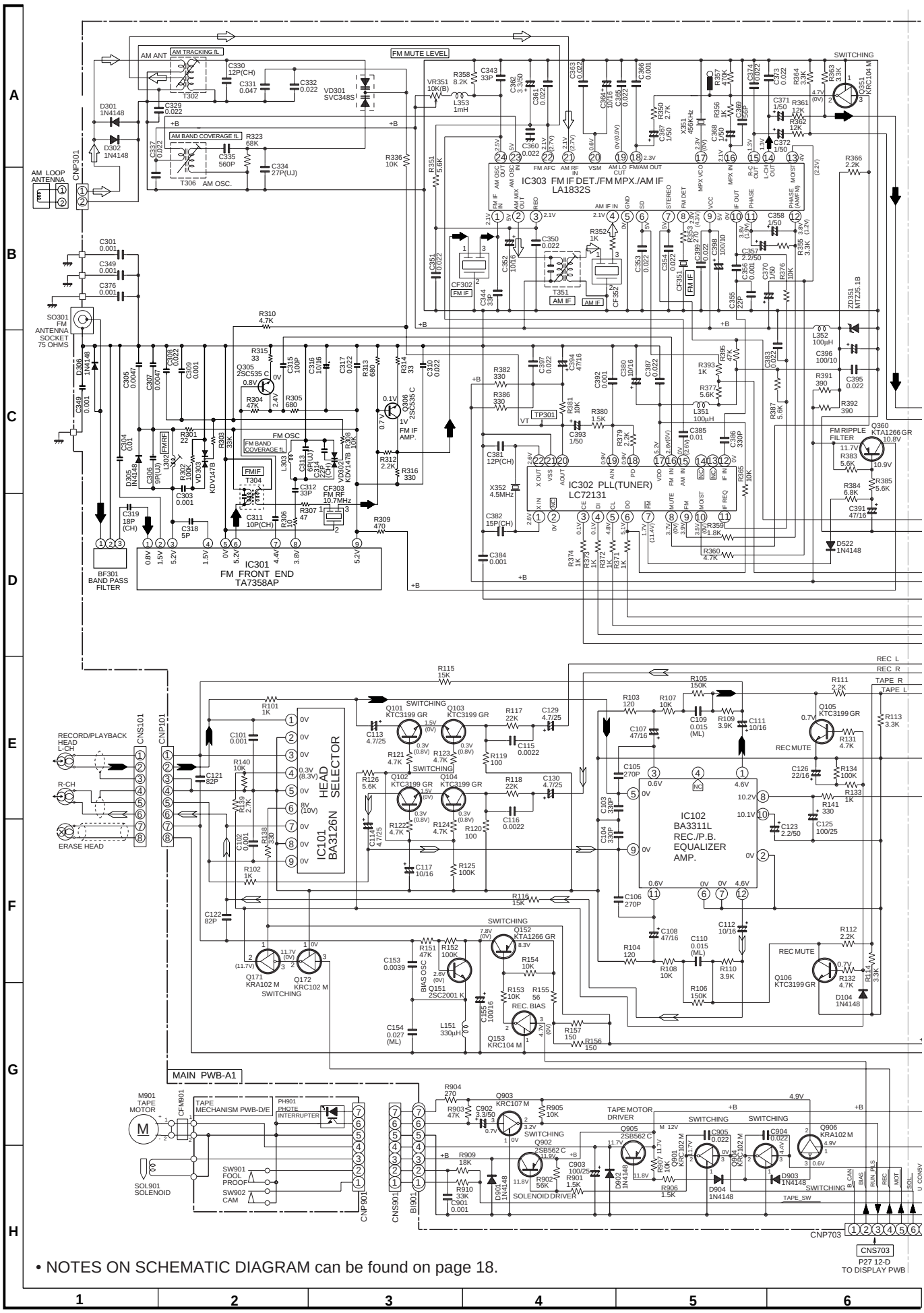
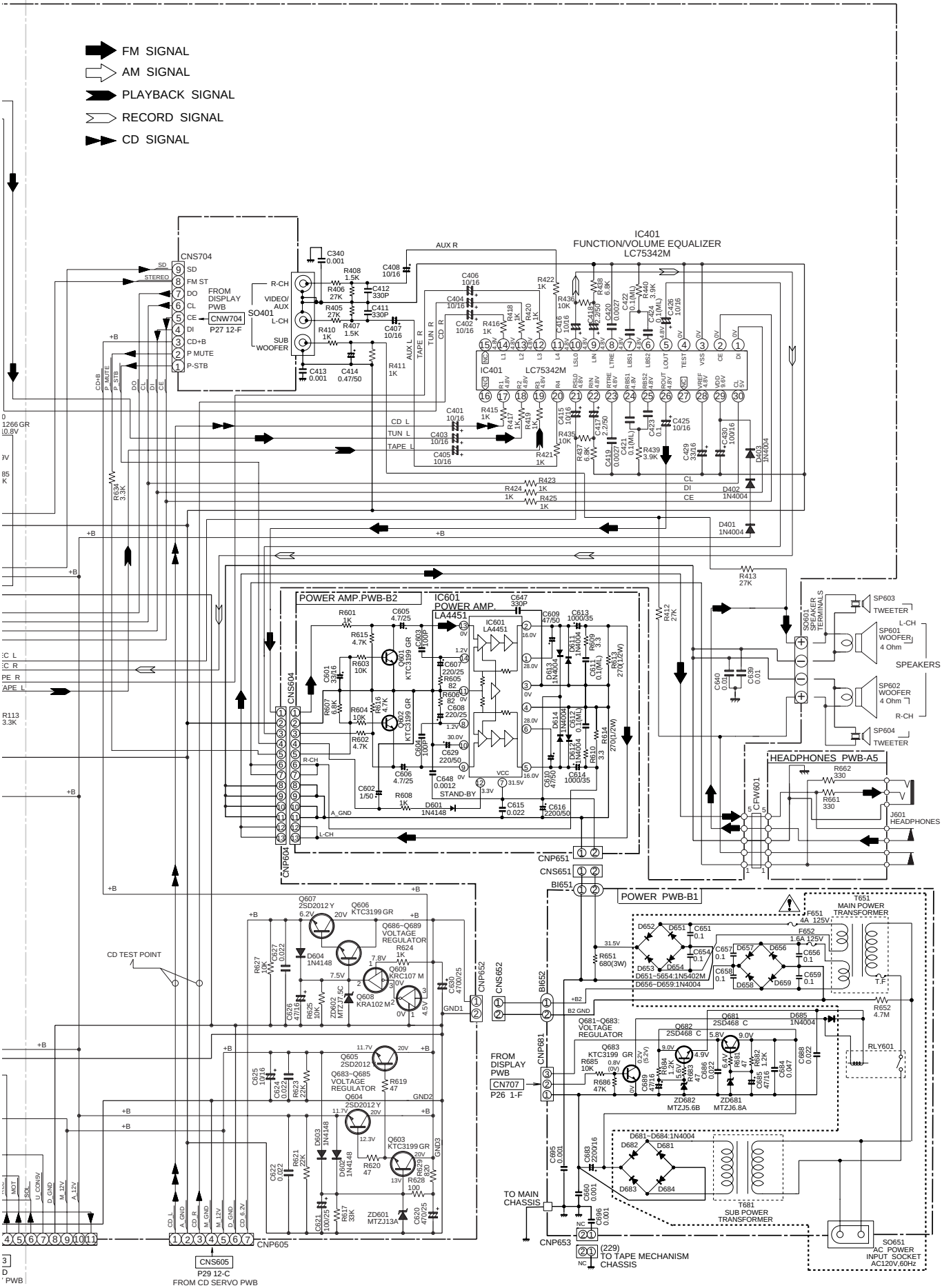


Figure 23 BLOCK DIAGRAM (4/4)



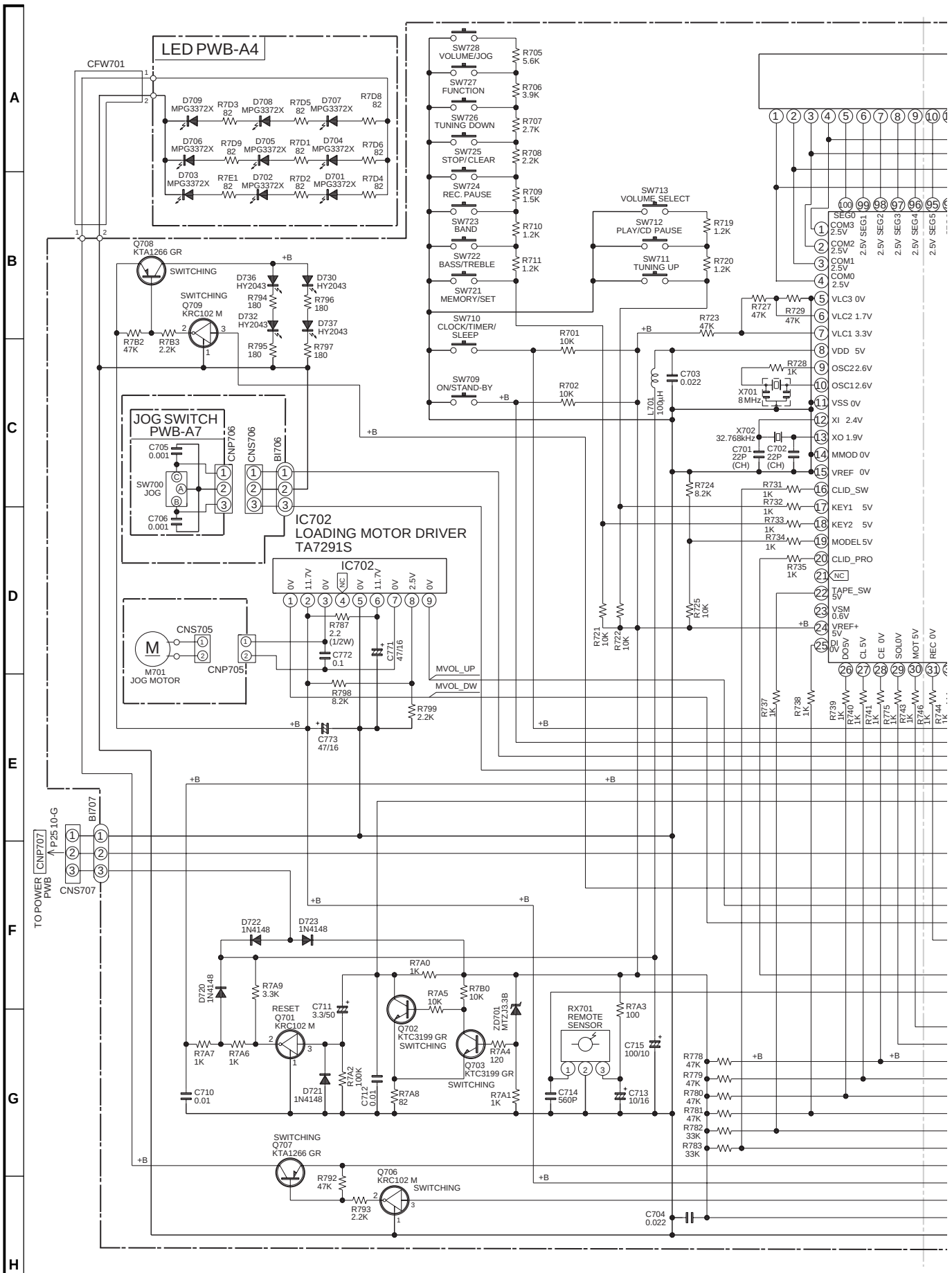
• NOTES ON SCHEMATIC DIAGRAM can be found on page 18.

Figure 24 SCHEMATIC DIAGRAM (1/6)



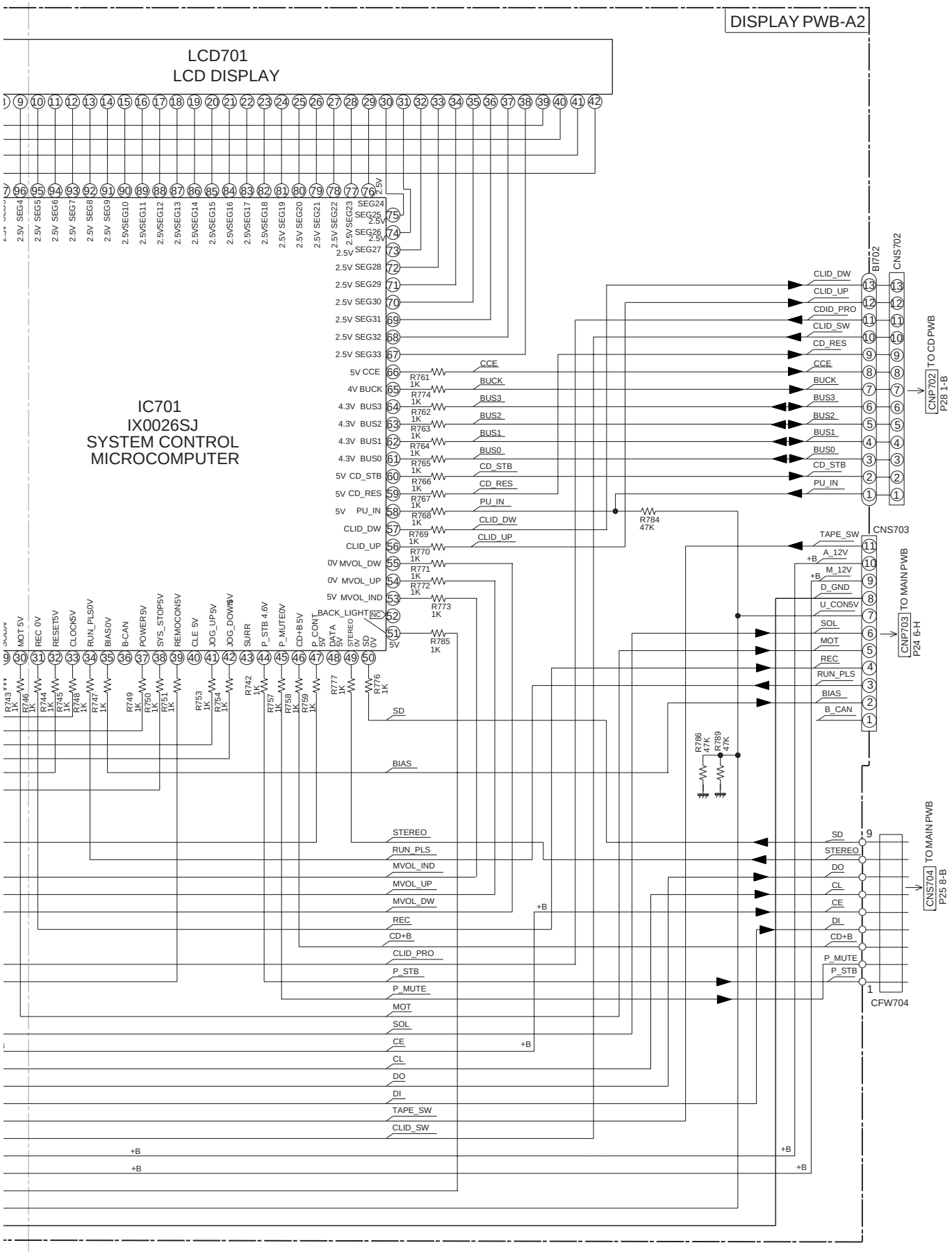
7	8	9	10	11	12

Figure 25 SCHEMATIC DIAGRAM (2/6)



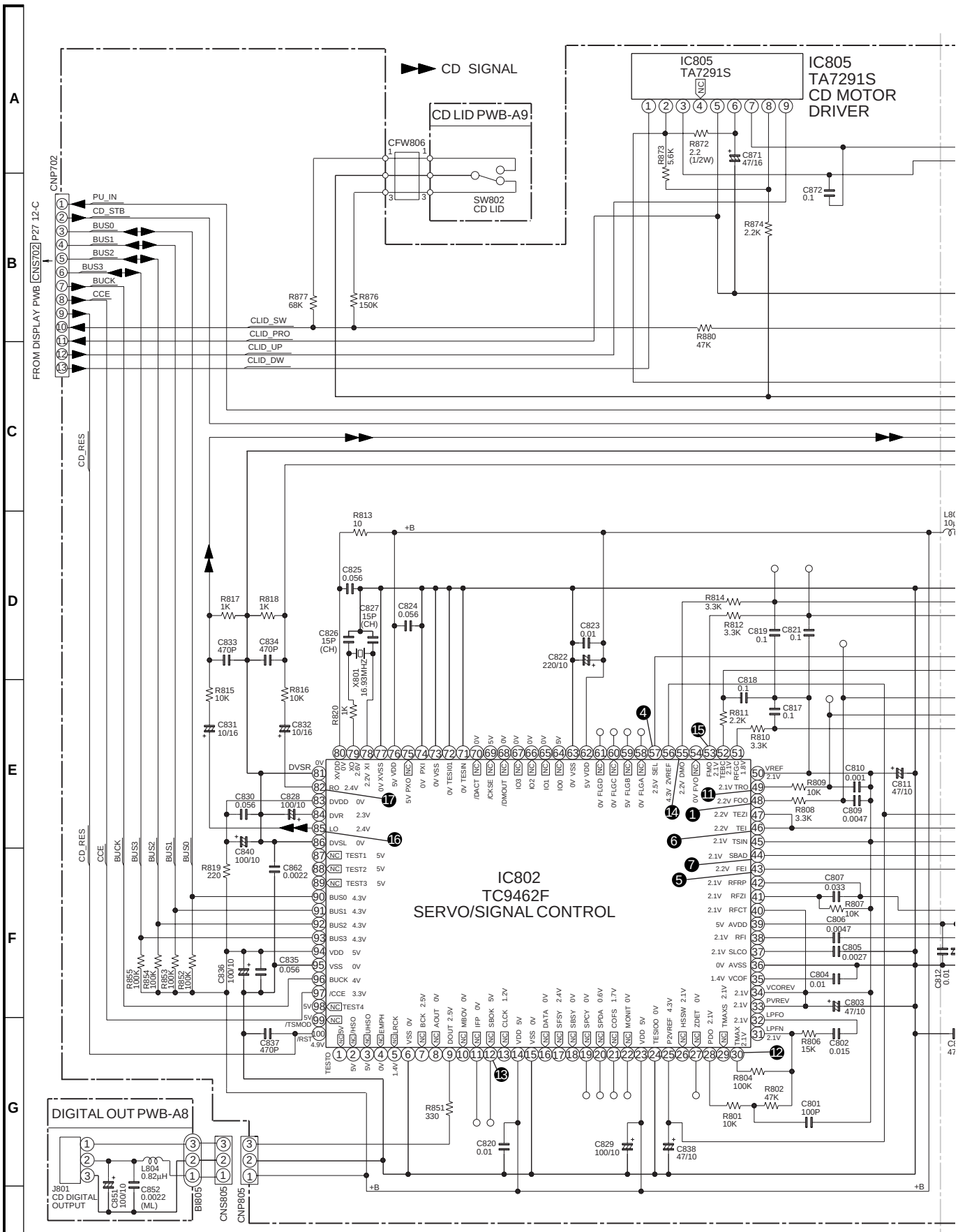
• NOTES ON SCHEMATIC DIAGRAM can be found on page 18.

Figure 26 SCHEMATIC DIAGRAM (3/6)



7	8	9	10	11	12

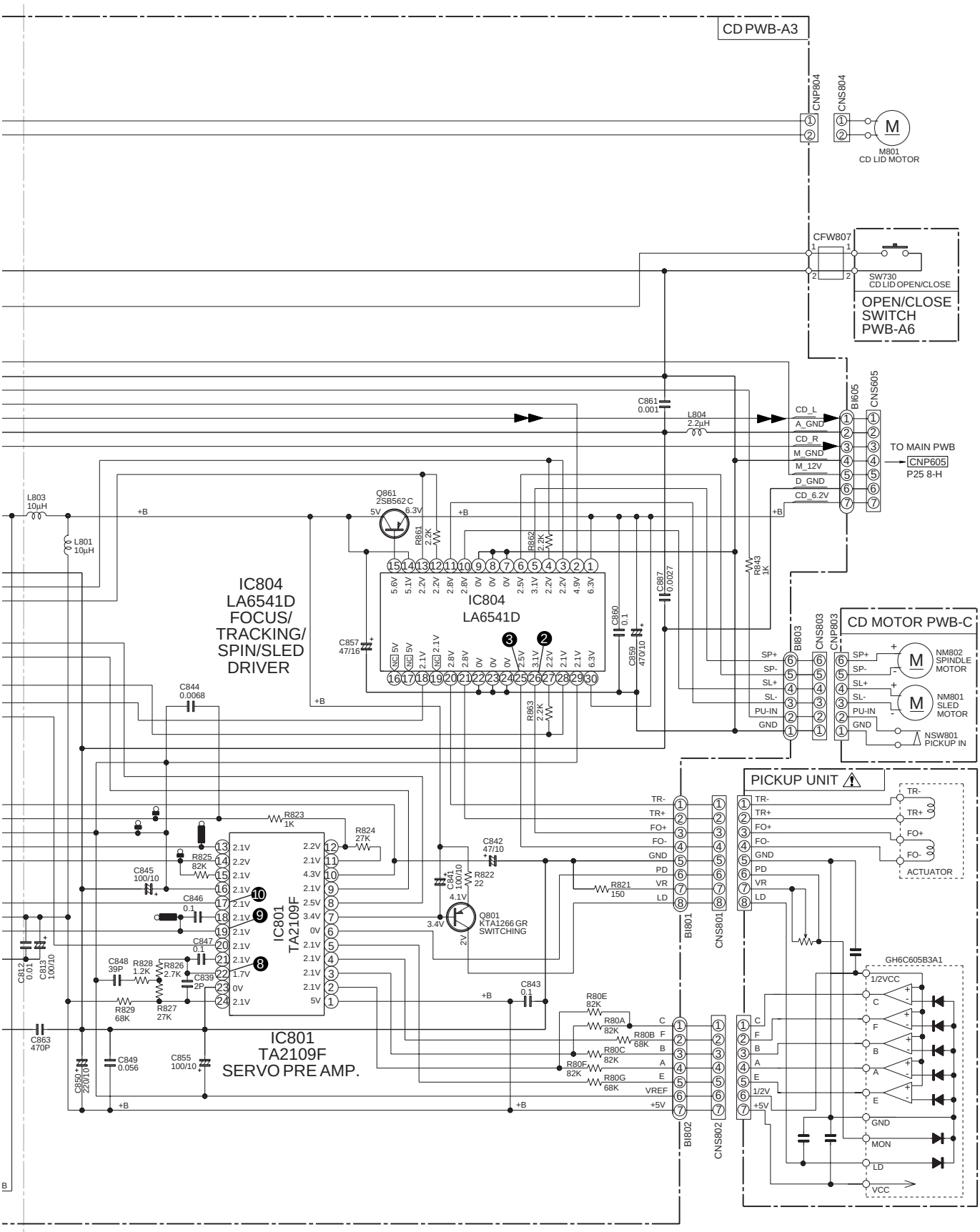
Figure 27 SCHEMATIC DIAGRAM (4/6)



• The numbers ❶ to ⓱ are waveform numbers shown in page 19.

• NOTES ON SCHEMATIC DIAGRAM can be found on page 18.

Figure 28 SCHEMATIC DIAGRAM (5/6)



7	8	9	10	11	12

Figure 29 SCHEMATIC DIAGRAM (6/6)

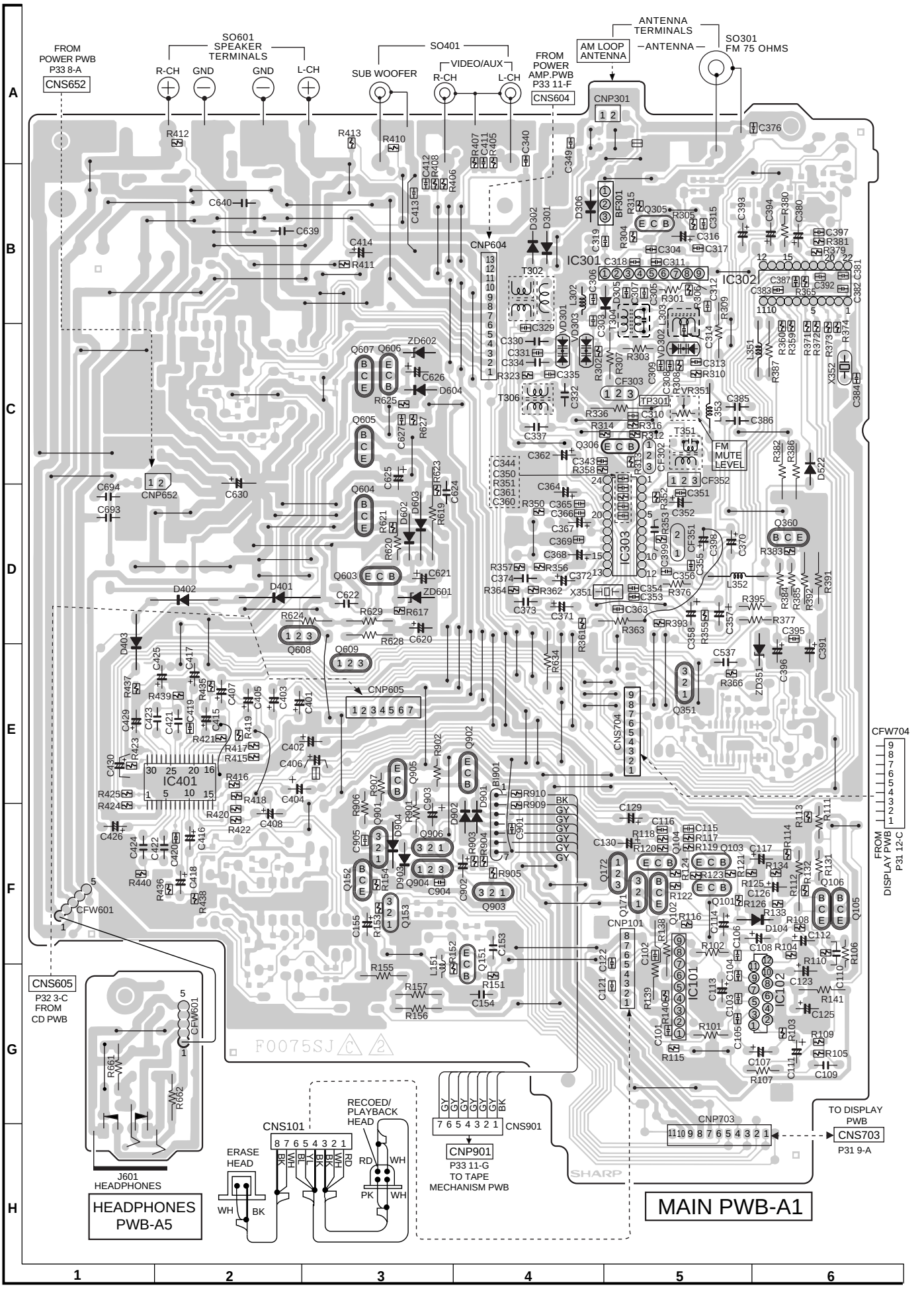
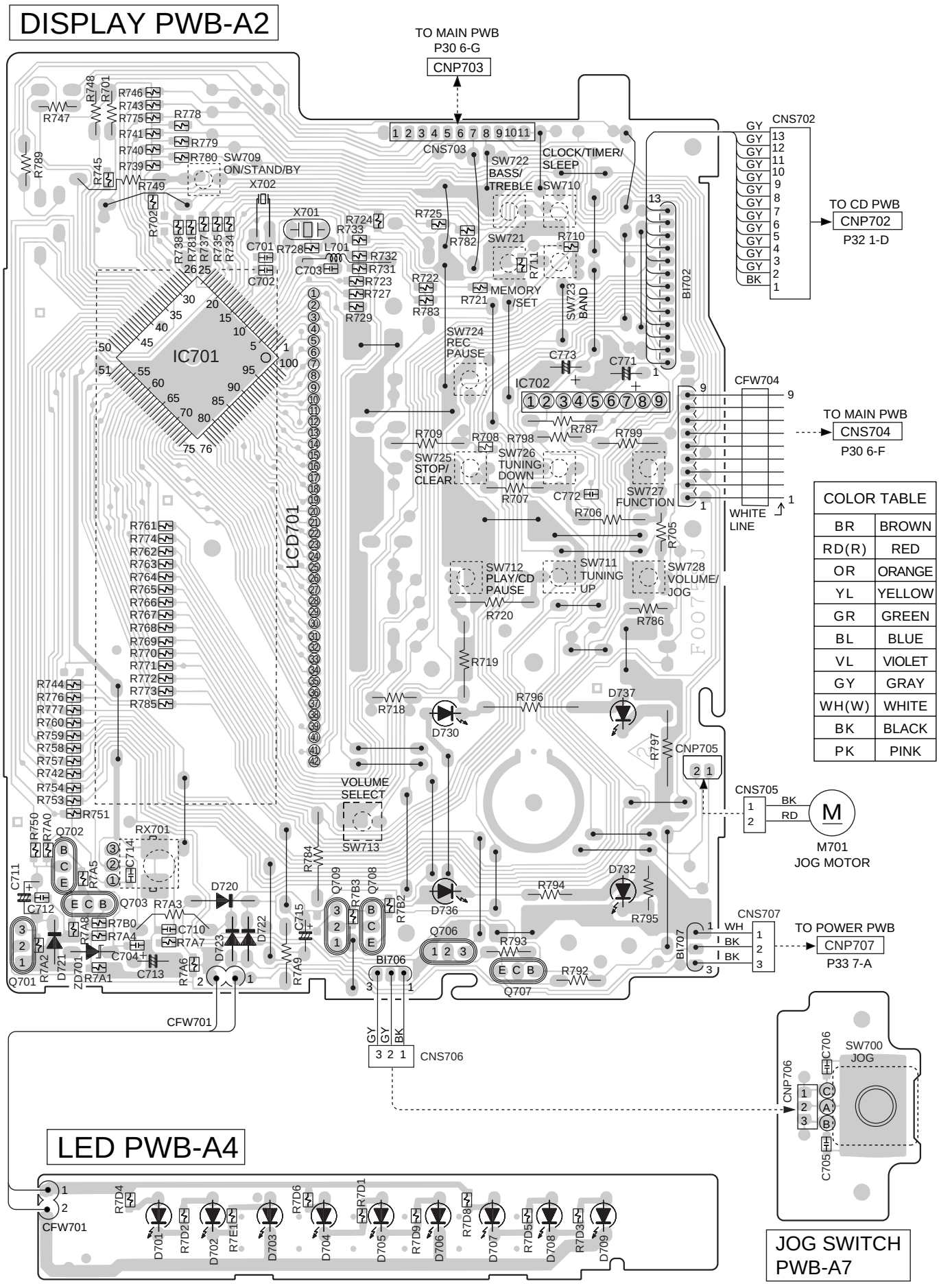
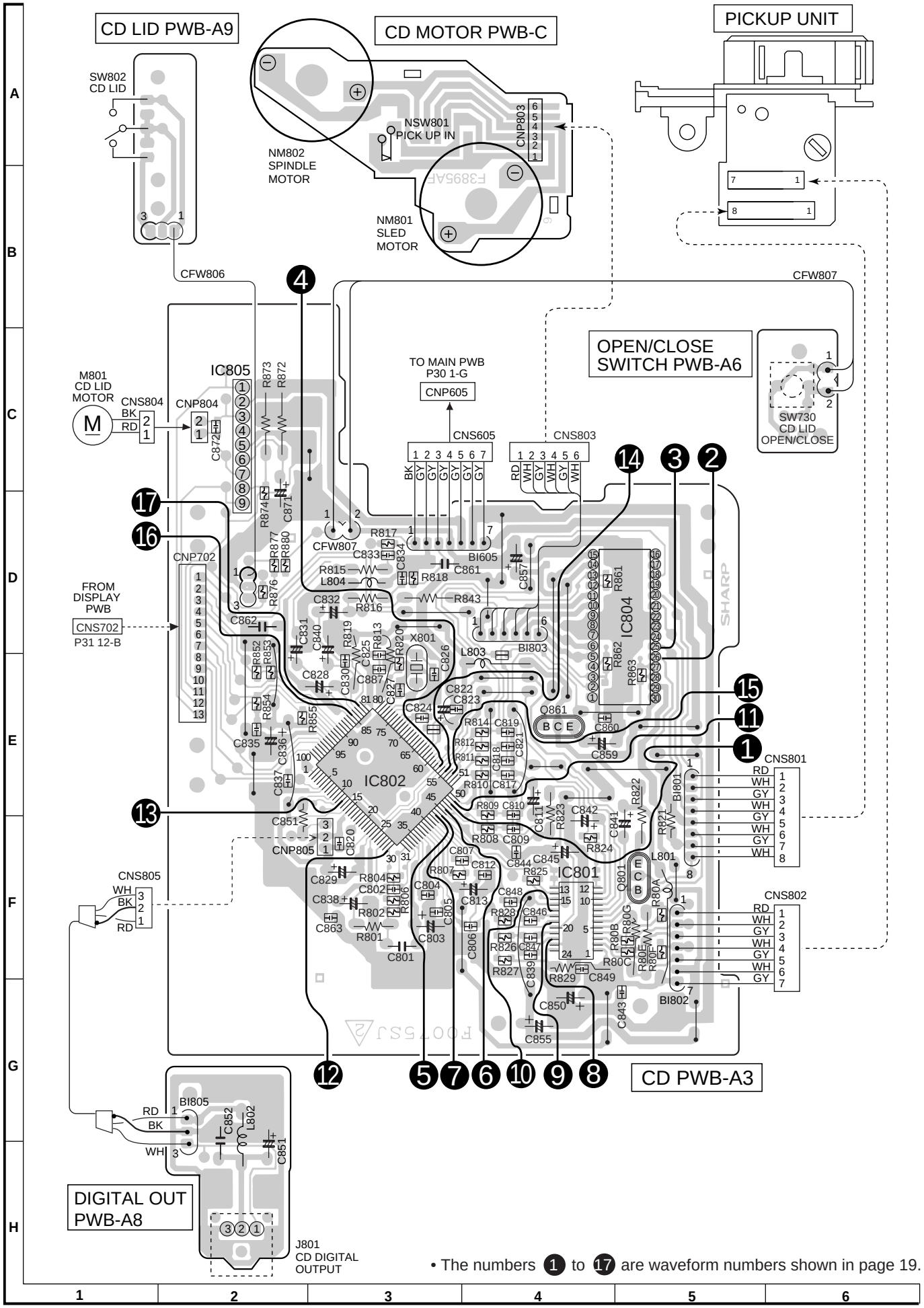


Figure 30 WIRING SIDE OF P.W.BOARD (1/4)



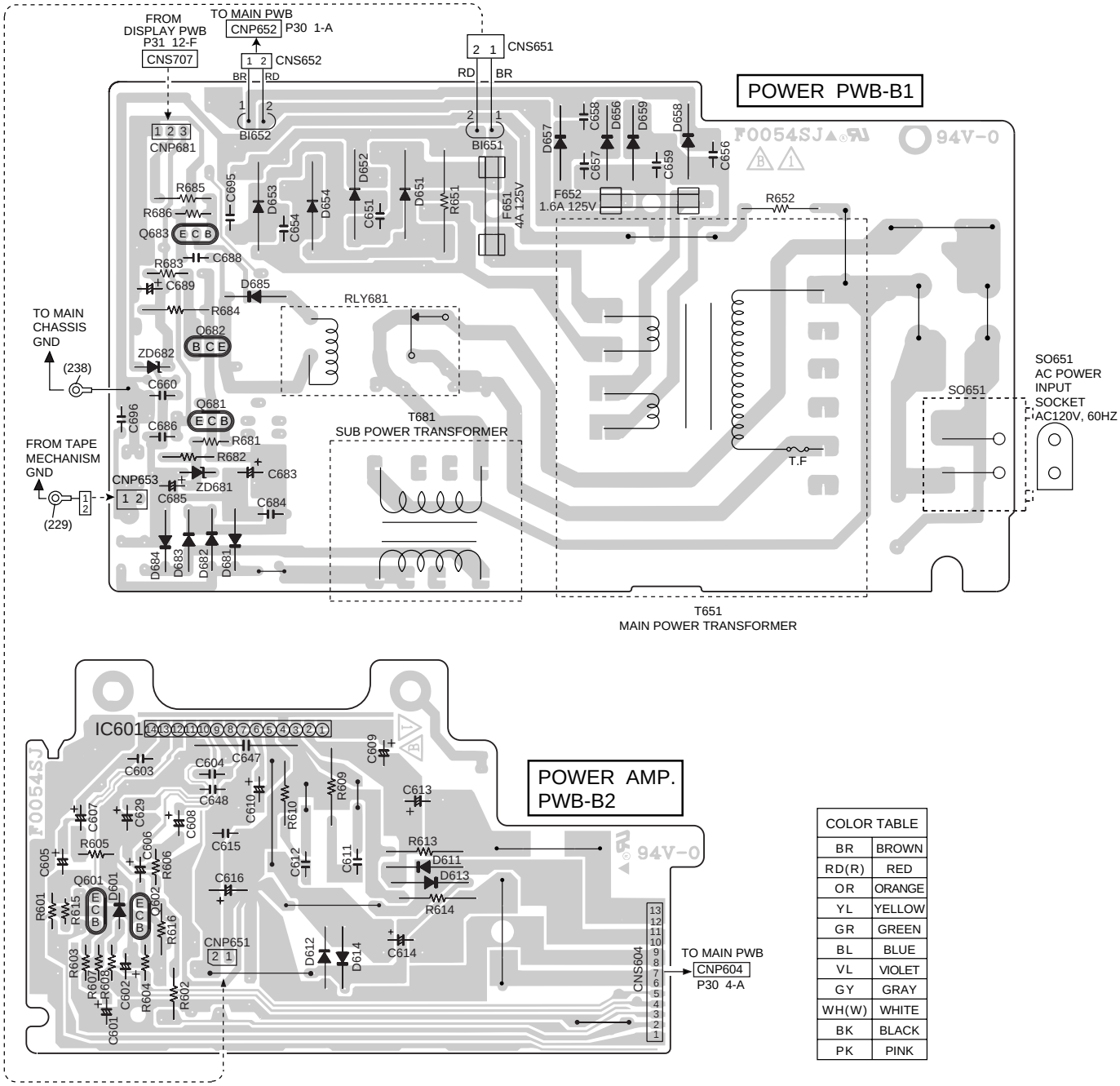
7	8	9	10	11	12

Figure 31 WIRING SIDE OF P.W.BOARD (2/4)

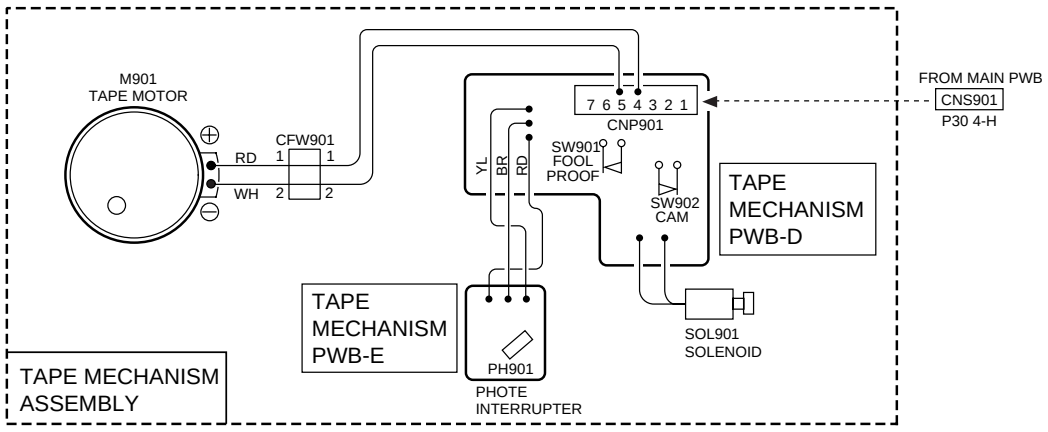


• The numbers ❶ to ⓱ are waveform numbers shown in page 19.

Figure 32 WIRING SIDE OF P.W.BOARD (3/4)



COLOR TABLE	
BR	BROWN
RD(R)	RED
OR	ORANGE
YL	YELLOW
GR	GREEN
BL	BLUE
VL	VIOLET
GY	GRAY
WH(W)	WHITE
BK	BLACK
PK	PINK



7	8	9	10	11	12

Figure 33 WIRING SIDE OF P.W.BOARD (4/4)

TROUBLESHOOTING

When the CD does not function

When the CD section does not operate when the objective lens of the optical pickup is dirty, this section may not operate. Clean the objective lens, and check the playback operation. When this section does not operate even after the above step is taken, check the following items.
Remove the cabinet and follow the troubleshooting instructions.
"Track skipping and/or no TOC (Table Of Contents) may be caused by build up of dust other foreign matter on the laser pickup lens. Before attempting any adjustment make certain that the lens is clean. If not, clean it as mentioned below."

Turn the power off.
Gently clean the lens with a lens cleaning tissue and a small amount of isopropyl alcohol.
Do not touch the lens with the bare hand.

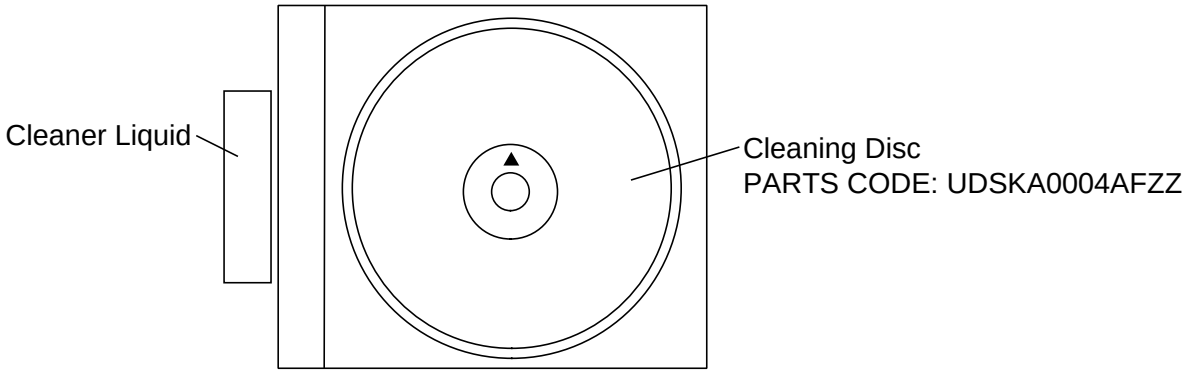
Dust gradually accumulates on the objective lens during use, and it may degrade performance. To avoid this problem, use a cleaning disc designed for CD optical pickup lenses.

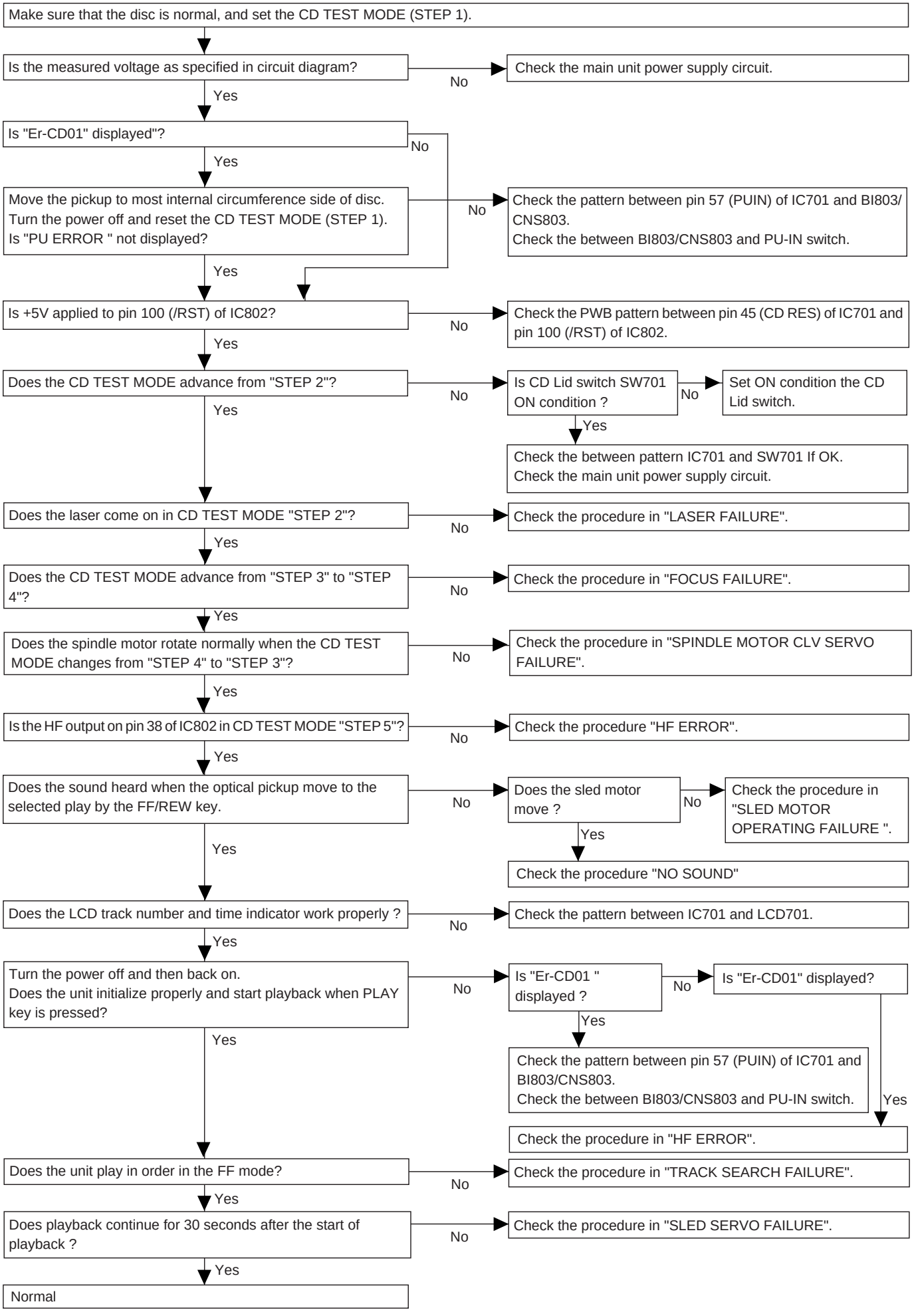
HOW TO USE

1. Using the brush in the cleaner cap, apply 1 or 2 drops of the cleaning fluid to the brush on the CD cleaner disc which has the ▲ mark next to it.
2. Place the CD cleaner disc onto the CD disc tray with the brush side down, then press the play button.
3. You will hear music for about 20 seconds and the CD player will automatically stop. If it continues to turn, press the stop button.

CAUTION

- The CD lens cleaner should be effective for 30~50 operations, however if the brushes become worn out earller then please replace the cleaner disc.
- If the CD cleaner brushes become very wet then wipe off any excess fluid with a soft cloth.
- Do not drink the cleaner fluid or allow it to come in contact with the eyes. In the event of this happening then drink and / or rinse with clean water and seek medical advice.
- The CD cleaner disc must not be used on car CD players or on computer CD ROM drives.
- All rights reserved. Unauthorized duplicating, broadcasting and renting this product is prohibited by law.




Make sure that the disc is normal, and set the CD TEST MODE (STEP 1).
Is the measured voltage as specified in circuit diagram?
No
Check the main unit power supply circuit.
Yes
Is "Er-CD01" displayed"?
No
Yes
Move the pickup to most internal circumference side of disc.
Turn the power off and reset the CD TEST MODE (STEP 1).
Is "PU ERROR " not displayed?
No
Check the pattern between pin 57 (PUIN) of IC701 and BI803/CNS803.
Check the between BI803/CNS803 and PU-IN switch.
Yes
Is +5V applied to pin 100 (/RST) of IC802?
No
Check the PWB pattern between pin 45 (CD RES) of IC701 and pin 100 (/RST) of IC802.
Yes
Does the CD TEST MODE advance from "STEP 2"?
No
Is CD Lid switch SW701 ON condition ?
No
Set ON condition the CD Lid switch.
Yes
Check the between pattern IC701 and SW701 If OK.
Check the main unit power supply circuit.
Yes
Does the laser come on in CD TEST MODE "STEP 2"?
No
Check the procedure in "LASER FAILURE".
Yes
Does the CD TEST MODE advance from "STEP 3" to "STEP 4"?
No
Check the procedure in "FOCUS FAILURE".
Yes
Does the spindle motor rotate normally when the CD TEST MODE changes from "STEP 4" to "STEP 3"?
No
Check the procedure in "SPINDLE MOTOR CLV SERVO FAILURE".
Yes
Is the HF output on pin 38 of IC802 in CD TEST MODE "STEP 5"?
No
Check the procedure "HF ERROR".
Yes
Does the sound heard when the optical pickup move to the selected play by the FF/REW key.
No
Does the sled motor move ?
No
Check the procedure in "SLED MOTOR OPERATING FAILURE ".
Yes
Check the procedure "NO SOUND"
Yes
Does the LCD track number and time indicator work properly ?
No
Check the pattern between IC701 and LCD701.
Yes
Turn the power off and then back on.
Does the unit initialize properly and start playback when PLAY key is pressed?
No
Is "Er-CD01 " displayed ?
No
Is "Er-CD01" displayed?
Yes
Check the pattern between pin 57 (PUIN) of IC701 and BI803/CNS803.
Check the between BI803/CNS803 and PU-IN switch.
Yes
Check the procedure in "HF ERROR".
Yes
Does the unit play in order in the FF mode?
No
Check the procedure in "TRACK SEARCH FAILURE".
Yes
Does playback continue for 30 seconds after the start of playback ?
No
Check the procedure in "SLED SERVO FAILURE".
Yes
Normal

• Laser failure.

Is +6.2V applied to the emitter of Q861 ?
- No → Check the PWB pattern between pin 16 of CNS602 and emitter of Q861.
- Yes ↓

Is +5V applied to the collector of Q861 ?
- No → Check the peripheral parts of IC804 and Q861.
- Yes ↓

Is +5V applied to the pin 62 (VDD) of IC802 ?
- No → Check the PWB pattern between collector of Q861 and pin 62 of IC802.
- Yes ↓

Is +5V applied to the pin 1 (VCC) of IC801 ?
- No → Check the PWB pattern between collector of Q861 and pin 1 of IC801.
- Yes ↓

Is 0V applied to the pin 57 (SEL) of IC802 ?
- No → Does the laser come on when pattern cut between pin 8 (SEL) of IC801 and pin 57 (SEL) of IC802 ?
  - Yes → Check the PWB pattern between IC701 and IC802 (BUCK/CCE/BUS0~3)
  - No
- Yes ↓

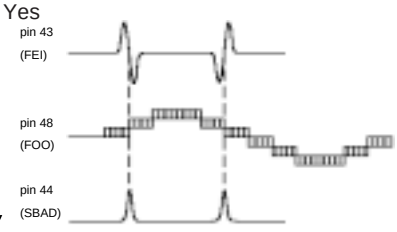
Is approx. 2V applied to the collector of Q801.
- No → Check the peripheral parts of IC801 and Q801. If it is normal, the optical pickup is faulty.
- Yes ↓

Check BI802/CNS802. If it is normal, the optical pickup is faulty.

• Focus failure.

Does the optical pickup move up and down when the disc is removed?
- No → Check as stated in item "FOCUS SERVO SAWTOOTH WAVE FAILURE".
- Yes ↓

Is the following waveform output at the pin 43 (FEI) of IC802 when the disc is set?
- No → Check the periphery of IC801 and BI802/CNS802. Is it normal?
  - Yes → The optical pickup is faulty.
- Yes ↓



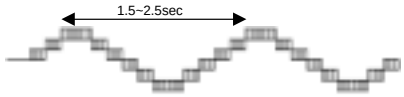
Is the waveform shown above input at the pin 44 (SBAD) of IC802?
- No → Check the pattern between pin 13 of IC801 and pin 44 of IC802. Check the periphery of IC801 and BI802/CNS802.
- Yes ↓

IC801 is faulty.

• Focus servo sawtooth wave failure.

Is sawtooh wave output to the pin 48 (FOO) of IC802 ?
No → IC802 is faulty.

Yes

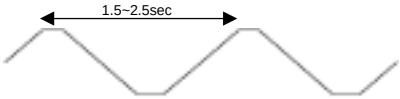


Is +6.2V applied to the pins 1 and 30 (VCC) of IC804 ?
No → Check the PWB pattern between pin 16 of CNS602 and IC804.

Yes

Is sawtooth wave obtained between pins 25 and 26 of IC804 ?
No → Is +5V applied to the pin 2 (MUTE) of IC804 ?
No → Check the PWB pattern between pin 2 of IC804 and pin 58 (CD STB) of IC701.
Yes → Check the PWB pattern between pin 48 (FOO) of IC802 and pins 27 and 28 of IC804. If OK. IC804 is faulty.

Yes



Is sawtooth wave obtained between pins 3 and 4 of BI801/ CNS801 ? (as shown above)
No → Check the PWB pattern between BI801/CNS801 and IC804.

Yes

BI801/CNS801 connection failure or optical pickup failure.

• Spindle motor clv servo failure.

Is following wave output to the pin 55 (DMO) of IC802 when the CD TEST MODE "STEP 3" is changed to " STEP 4" ?
No → Check the procedure in "HF ERROR". If OK. IC802 is faulty.

Yes

Is above wave obtained between pins 5 and 6 of IC804 ?
No → Check the PWB pattern between pin 55 (DMO) of IC802 and pins 5 and 6 of IC804. If OK. IC804 is faulty.

Yes

Is above wave obtained between pins 5 and 6 of BI801/ CNS801 ?
No → Check the PWB pattern between BI801/CNS801 and IC804.

Yes

BI801/CNS801 connection failure or optical pickup failure.

• HF error.

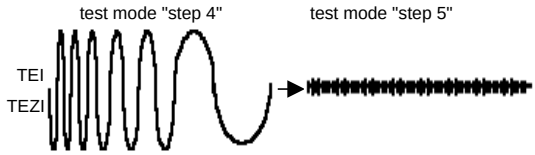
Is output (tracking error signal) obtained at the pins 46 (TEI) and 47 (TEZI) of IC802 the CD TEST MODE "STEP 4" is changed to "STEP 5"?

No → Is output obtained at the pins 2 and 5 of BI802/CNS802

No → Optical pickup failure.

Yes

Yes



Check the periphery of IC801.
Check the PWB pattern between pin 12.
(TEO) of IC801 and pins 46 and 47 of IC802.
Is it normal ?

No → IC801 is faulty.

Yes

Check the PWB pattern between pin 50 (TEO) of IC802 and pin 18 of IC804.
Check the periphery of IC804 and BI801/CNS801.
If OK. Optical pickup failure.

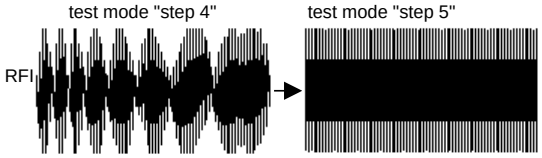
Is output (HF signal) obtained at the pin 38 (RFI) of IC802 when the CD TEST MODE "STEP 4" is changed to "STEP 5"?

No → Is output obtained at the pins 1 and 3, 4 of BI802/CNS802.

No → Optical pickup failure.

Yes

Yes

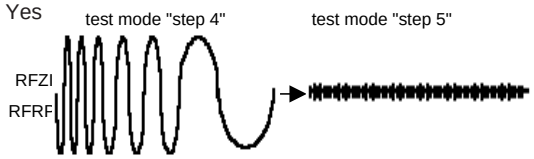


Check the periphery of IC801.
Check the PWB pattern between pin 19 (RFGO) of IC801 and pins 38 (RFI) of IC802.
If OK. IC801 is faulty

Is output (HF signal) obtained at the pins 41 (RFZI) and 42 (RFRP) of IC802 when the CD TEST MODE "STEP 4" is changed to "STEP 5"?

No → Check the periphery of IC801.
Check the PWB pattern between pin17 (RFRP) of IC801 and pins 41 (RFZI) and 42 (RFRP) of IC802.
If OK. IC801 is faulty.

Yes



Is the following wave output to the pin 55 (DMO) of IC802 when the CD TEST MODE "STEP 4" or "STEP 5"?

No → Check the periphery pins 28~32 of IC802.
If OK. IC802 failure.

Yes

Normal.

• No sound.

No sound from both L and R-ch?

No → Check the interval between the pins 82 or 85 of IC802 and the pins 1 or 3 IC601.

Yes

Is +4.5V applied to pin 83 (DVDD) of IC802?

No → Check the PWB pattern between R819 and Q861.

Yes

Is signal of pins 82 and 85 of IC802 output?

No → Check the peripheral parts of IC802. If OK, IC802 is faulty.

Yes

The main PWB is faulty.

• Track search failure

Does the sled motor run in FF/REW state when the SERVO TEST MODE "STEP1" is set?
- No → Check as stated in item "SLED MOTOR OPERATION FAILURE".
- Yes ↓

Is the following wave output to the pin 49 (TRO) of IC802 during track search in normal playback?
- No → IC802 failure.
- Yes ↓

Is the following wave output to the pins 12 (TEO) of IC801 during track search in normal playback?
- No → Check the PWB pattern between pin 49 (TRO) of IC802 and pin 18 of IC804. Check the PWB pattern between pins 20 and 21 of IC804 and Optical pickup. If OK. Optical pickup failure.
- Yes ↓

Is the above wave output to the pins 46 (TEI) and 47 (TEZ) of IC802 during track search in normal playback?
- No → Check the PWB pattern between pin 12 (TEO) of IC801 and pins 46 and 47 of IC802. If OK. IC801 failure.
- Yes ↓

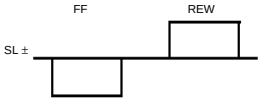
Is the following wave output to the pin 41 (RFZI) and 42 (RFRP) of IC802 during track search in normal playback?
- No → Check the PWB pattern between pin 17 (RFO) and 18 (RFIS), 19 (RFRP) of IC801 and pins 41 and 42 of IC802. If OK. IC801 failure.
- Yes ↓

Normal.

• Sled motor operation failure.

Is following sled feed signal output the pin 53 (FMO) of IC802 when FF/REW key is pressed after the CD TEST MODE "STEP 1" is seted?
- No → C801 is faulty.
- Yes ↓

Is following sled feed signal output the pins 12 and 13 of IC804 when FF/REW key is pressed after the CD TEST MODE "STEP 1" is seted?
- No → Check the PWB pattern between pin 53 of IC802 and pins 12 and 13 of IC804.
- Yes ↓



Is sled feed signal output the pins 10 and 11 of IC804?
- No → Check the peripheral parts of IC804. If OK, IC804 is faulty.
- Yes ↓

Is sled feed voltage applied between both terminals of sled motor?
- No → Check the BI803/CNS803.
- Yes ↓

Check the CD mechanism (periphery of sled motor). If the sled motor does not run when DC2.0V is applied to both terminals of sled motor, the sled motor is faulty.

• Sled servo failure.

Is following sled signal output the pin 53 (FMO) of IC802 during playback?
- No → IC802 is faulty.
- Yes ↓

Normal.

FUNCTION TABLE OF IC

IC401 VHiLC75342M-1: Function/Volume Equalizer (LC75342M)

Pin No.	Port Name	Function
1	DI	Serial data and clock input pin for control.
2	CE	Chip enable pin. Data written into an internal latch in a timing of [H] -> [L]. Each analog switch is activated. Data transfer enabled at [H] level.
3	VSS	Ground pin.
4	TEST	Electronic volume control pin. To be set to the VSS potential.
5	LOUT	Volume + equalizer output pin.
6	LBASS2	Bass-band filter comprising capacitor and resistor connection pin.
7	LBASS1	Bass-band filter comprising capacitor and resistor connection pin.
8	LTRE	Capacitor connection pin comprising treble band filter.
9	LIN	Volume + equalizer input pin.
10	LSEL0	Input selector output pin.
11-14	L4-L1	Input signal pin.
15*	NC	No CONNECT pin. To be open or connected to VSS.
16*	NC	No CONNECT pin. To be open or connected to VSS.
17-20	R1-R4	Input signal pin.
21	RSEL0	Input selector output pin.
22	RIN	Volume + equalizer input pin.
23	RTRE	Capacitor connection pin comprising treble band filter.
24	RBASS1	Bass-band filter comprising capacitor and resistor connection pin.
25	RBASS2	Bass-band filter comprising capacitor and resistor connection pin.
26	ROUT	Volume + equalizer output pin.
27*	NC	No CONNECT pin. To be open or connected to VSS.
28	Vref	0.5 x VDD voltage generation block for analog ground. Capacitor of several 10μF to be connected between Vref and AWSS (VSS) as a counter measure against power ripple.
29	VDD	Supply pin.
30	CL	Serial data and clock input pin for control.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC401 VHiLC75342M-1: Function/Volume Equalizer (LC75342M)

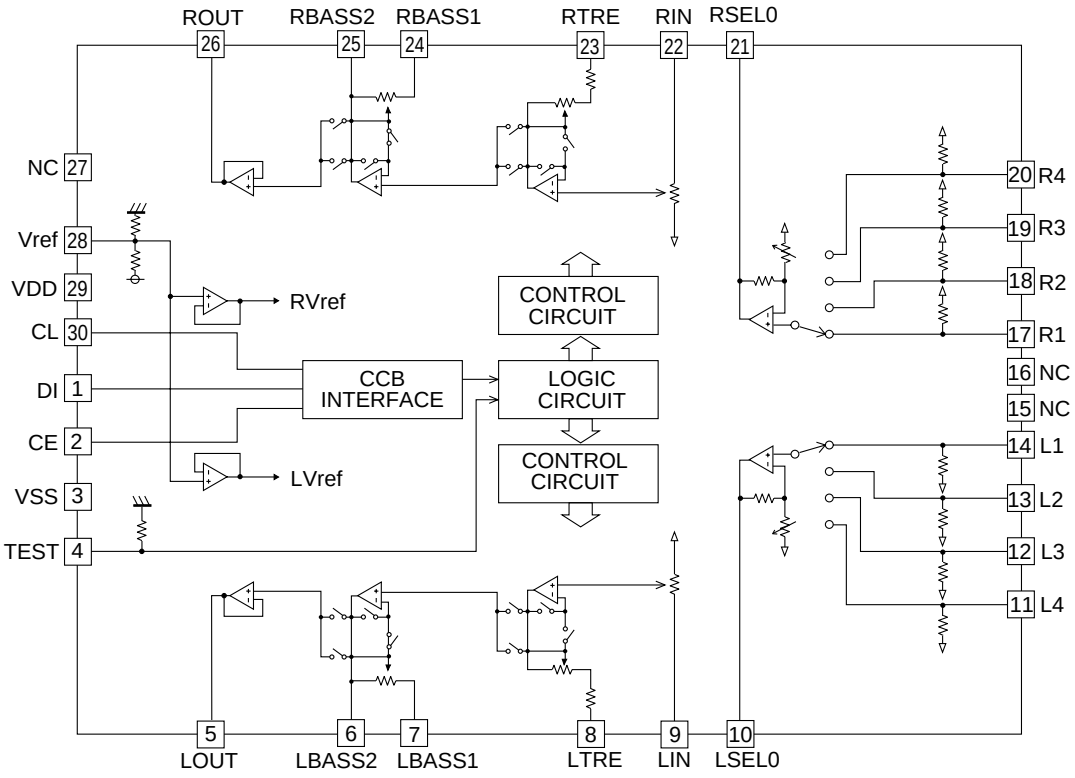


Figure 40 BLOCK DIAGRAM OF IC

IC701 RH-iX0026SJZZ: System Control Microcomputer (IX0026SJ) (1/2)

Pin No.	Terminal Name	Input/Output	Function
1-4	COM3-COM0	Output	LCD common output terminal.
5-7	VLC3-VLC1	—	LCD power supply terminal.
8	VDD	—	Microcomputer power supply +5V.
9	OSC2	Output	Oscillator ground terminal for main clock. f=8MHz
10	OSC1	Input	Oscillator ground terminal for main clock. f=8MHz
11	VSS	—	Microcomputer power supply GND.
12	XI	Input	Oscillator ground terminal for sub clock. f=32.768kHz
13	XO	Output	Oscillator ground terminal for sub clock. f=32.768kHz
14	MMOD	Input	Memory mode selection terminal.
15	VREF-	—	Power supply GND for AD converter.
16	KEY0 AN0/PA0	Input	CD lid status detection input.
17	KEY1 AN0/PA1	Input	Operation button input, Max-8 buttons.
18	KEY2 AN0/PA2	Input	Operation button input, Max-8 buttons.
19	KEY3 AN0/PA3	Input	MODEL/TUNER destination input.
20	KEY4 AN0/PA4	Input	Current detection of CD lid control motor. Used to decide the CD lid drive error to control it.
21*	KEY5 AN0/PA5	Input	CD servo auto adjustment mode selection input.
22	KEY6 AN0/PA6	Input	Tape mechanism operating status detection input. Decides the F.P/CAM-SW status with A/D value.
23*	KEY7 AN7/PA7	Input	Tuner signal meter (S meter) voltage input terminal.
24	VREF+	—	Power supply for A/D converter +5V.
25	TXD SBO0/P00	Output	Data output terminal to TUNER PLL IC.
26	RXD SBI0/P01	Input	Data input from TUNER PLL IC
27	SBT0/P02	Output	Synchronous clock output with TUNER PLL IC
28	SBO1/P03	Output	Enable output of TUNER PLL IC. "L" = OFF, "H" = ON
29	SBI1/P04	Output	Tape mechanism solenoid drive control output.
30	SBT1/P05	Output	Tape mechanism motor drive control output.
31	DK/BZER P06	Output	Recording/playback selection output of tape circuit. "H" = Recording mode, "L" = Playback mode
32	RST/P27	Input	Reset signal input
33	RMOUT P10	Input	CLOCK/TIMER/SLEEP button input.
34	P11	Input	Tape run/END detection input. Decided as tape run if pulse is input.
35	TM2IO P12	Output	Recording bias oscillation circuit control output. "H" = Bias oscillation, "L" = oscillation stop.
36*	TM3IO P13	Output	Recording bias oscillation frequency selection control output.
37	TM4IO P14	Input	Power (POWER) button input detection.
38	IRQ0 P20	Input	Switches to the HALT mode when changing to . "L" at power failure detection input.
39	SENS IRQ1/P21	Input	Remote control signal input.
40*	IRQ2 P22	Input	Synchronous clock input with RDS IC.
41	IRQ3 P23	Input	Jog dial UP pulse input.
42	IRQ4 P24	Input	Jog dial DOWN pulse input.
43*	P30	Output	SURROUND control output.
44	P31	Output	POWER IC STAND-BY terminal CONTROL.
45	P32	Output	Power mute output. "H" = MUTE ON, "L" = MUTE OFF
46	LED0 WE/P50	Output	CD servo power supply circuit control output. "H" = CD power ON, "L" = CD power OFF
47	LED1 RE/P51	Output	Main TRANS RELAY CONTROL. "H" = ON, "L" = OFF
48*	LED2 CS/P52	Input	Data input from RDS IC.
49	LDE3/S51 A16/P53	Input	Radio stereo broadcast reception detection input. "L" = During stereo broadcast reception
50	LED4/S50 A17/P54	Input	Broadcast reception status detection input. "L" = During broadcasting signal reception
51	SEG49 P60/A0	Output	LCD backlight control signal output. "H" = Backlight ON, "L" = Backlight OFF
52*	SEG48 P61/A1	Output	LCD segment output. "H" = ON, "L" = OFF
53	SEG47 P62/A2	Output	LED illumination control of electric JOG dial. "H" = ON, "L" = OFF

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC701 RH-iX0026SJZZ: System Control Microcomputer (IX0026SJ) (2/2)

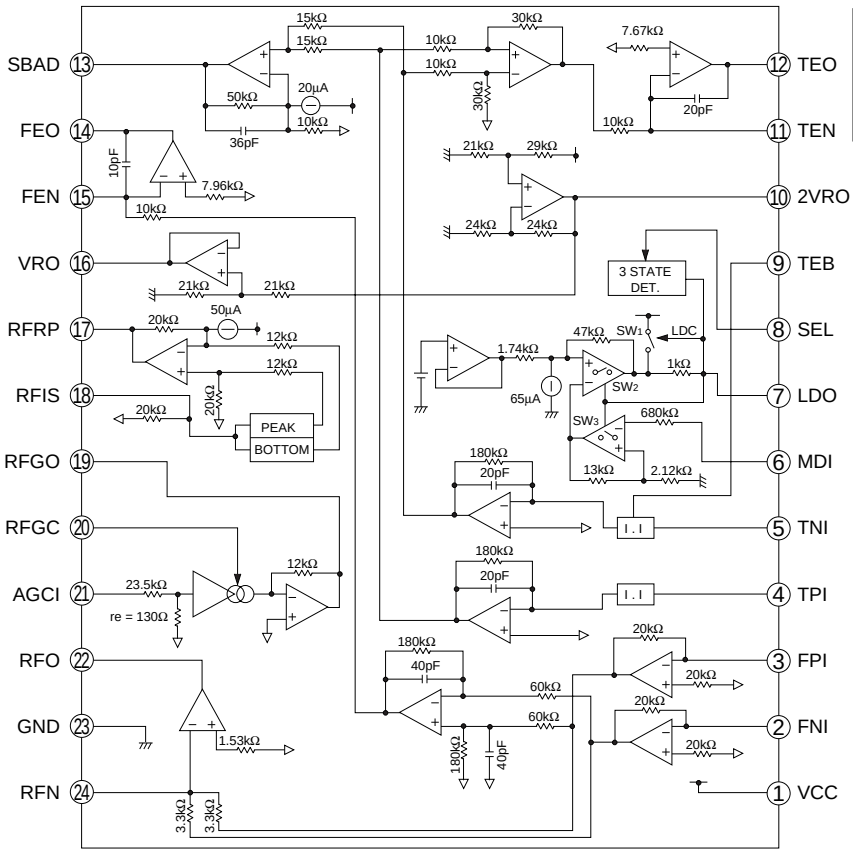
Pin No.	Terminal Name	Input/Output	Function
54	SEG46 P63/A3	Output	Electric JOG dial UP.
55	SEG45 P64/A4	Output	Electric JOG dial DOWN.
56	SEG44 P65/A5	Output	Electric CD lid OPEN.
57	SEG43 P66/A6	Output	Electric CD lid CLOSE.
58	SEG42 P67/A7	Input	CD pickup position detection SW input. "L" = Innerst periphery
59	SEG41 P70/A8	Output	Reset signal output for TC9462F
60	SEG40 P71/A9	Output	ON/OFF output terminal of CD servo control IC. "H" = Servo ON, "L" = Servo stand-by
61-64	SEG39 P72/A10- SEG36 P75/A13	Input/Output	Data input/output terminal for TC9462F control.
65	SEG35 P76/A14	Output	Data synchronous clock output for TC9462F.
66	SEG34 P77/A15	Output	Chip enable terminal for TC9462F. "L" = BUS terminal active
67	SEG33 P87/D7	—	LCD segment output.
68	SEG32 P86/D6	—	LCD segment output.
69-74	SEG31 P85/D5- SEG26 P80/D0	—	LCD segment output Note: Since RH-******SJZZ, SEG0 of the LCD is connected by the 24-pin LCD to SEG7 of the microcomputer output terminal, and connections are made up to the shift SEG26 in order.
75-100	SEG25-SEG0	—	LCD segment output Note: Since RH-******SJZZ, SEG0 of the LCD is connected by the 24-pin LCD to SEG7 of the microcomputer output terminal, and connections are made up to the shift SEG26 in order.

IC701 RH-iX0026SJZZ: System Control Microcomputer (IX0026SJ)

IC801 VHiTA2109F/-1:Servo Pre Amp. (TA2109F)

Pin No.	Terminal Name	Input/Output	Function
1	VCC	—	Power voltage terminal
2	FNI	Input	Main beam amp input terminal
3	FPI	Input	Main beam amp input terminal
4	TPI	Input	Sub-beam amp input terminal
5	TNI	Input	Sub-beam amp input terminal
6	MDI	Input	Monitor photodiode amp input terminal
7	LDO	Output	Laser diode amp output terminal
8	SEL	Input	Laser diode control signal input and APC circuit ON/OFF signal input terminal
9	TEB	Input	Tracking error balance adjustment signal input terminal To be controlled by 3-value PWM signal. (PWM carrier = 88.2 kHz)
10	2VRO	Output	Standard voltage (2VR) output terminal. When Vcc = 5V, 2VR = 4.2V.
11	TEN	Input	Tracking error signal generation amp reversed phase input terminal
12	TEO	Output	Tracking error signal generation amp output terminal
13	SBAD	Output	Sub-beam addition signal output terminal
14	FEO	Output	Focus error signal generation amp output terminal
15	FEN	Input	Focus error signal generation amp reversed phase input terminal
16	VRO	Output	Standard voltage (VR) output terminal. When Vcc = 5V, VR = 2.1V.
17	RFRP	Output	Track count signal generation amp output terminal
18	RFIS	Input	RFRP detection circuit input terminal
19	RFGO	Output	RF signal output terminal
20	RFGC	Input	RF amplitude adjustment control signal input terminal The amplitude of RF signal can be controlled by using the 3-value PWM signal (PWM carrier = 88.2 kHz) which is output from the RFGC terminal of TC9432F.
21	AGCI	Input	RF signal amplitude adjustment amp input terminal
22	RFO	Output	RF signal generation amp output terminal
23	GND	—	GND terminal
24	RFN	Input	RF reversed phase input terminal

IC801 VHiTA2109F/-1:Servo Pre Amp. (TA2109F)



SEL	LDC		
	SW1	SW2	SW3
L	ON	OFF	OFF
HiZ	OFF	ON	ON
H	OFF	ON	ON

Figure 43 BLOCK DIAGRAM OF IC

IC802 VHiTC9462F/-1: Servo/Signal Control (TC9462F) (1/3)

Pin No.	Port Name	Input/Output	Function
1*	TEST0	Input	Test mode terminal. To be opened usually.
2* 3*	/HSO /UHSO	Output Output	Playback speed mode flag output terminal. /UHSO / /HSO / Playback speed H / H / x1 speed playback H / L / x2 speed playback L / H / x4 speed playback L / L / —
4*	EMPH	Output	Sub-code Q data emphasis flag output terminal. "H": Emphasis ON "L": Emphasis OFF The output polarity can be inverted by command.
5*	LRCK	Output	Channel clock (44.1 kHz) output terminal. "L": L channel "H": R channel The output polarity can be inverted by command.
6	VSS	—	Digital ground terminal.
7*	BCK	Output	Bit clock (1.4122 MHz) output terminal.
8*	AOUT	Output	Audio data output terminal.
9	DOUT	Output	Digital out output terminal.
10*	MBOV	Output	Buffer memory over signal output terminal. "H": Over
11*	IPF	Output	Correction flag output terminal. "H": When AOUT output is correction-disabled symbol in case of C2 correction output.
12*	SBOK	Output	Sub-code Q data CRCC judgment result output terminal. "H": When judgment result is OK.
13*	CLCK	Input/Output	Sub-code P-W data read clock output/input terminal. Selectable with command bit.
14	VDD	—	Digital + power terminal.
15	VSS	—	Digital ground terminal.
16*	DATA	Output	Sub-code P-W data output terminal.
17*	SFSY	Output	Playback system frame sync signal output terminal.
18*	SBSY	Output	Sub-code block sync output terminal. "H": On S1 position when the sub-code sync is detected.
19*	SPCK	Output	Processor status signal read clock (176.4 kHz) output terminal.
20*	SPDA	Output	Processor status signal output terminal.
21*	COFS	Output	Correction system frame clock (7.35 kHz) output terminal.
22*	MONIT	Output	LSI internal signal monitor terminal. It is possible to monitor the DSP internal flag and PLL system clock with the microcomputer command. Terminal for serial output of text data according to command.
23	VDD	—	Digital + power terminal.
24	TESIO0	Input	Test input/output terminal. To be fixed to "L" usually. Terminal to input the text data read clock according to command.
25	P2VREF	—	2VREF terminal for PLL system.
26*	HSSW	Output	VREF voltage in case of x2 speed/x4 speed.
27*	ZDET	Output	1-bit DAC zero detection flag output terminal.
28	PDO	Output	Terminal to output the phase difference between EFM signal and PLCK signal.
29*	TMAXS	Output	TMAX detection result output terminal. To be selected with command bit TMPS.
30	TMAX	Output	TMAX detection result output terminal. To be selected with command bit TMPS. TMAX detection result / TMAX output Longer than specific period / "P2VREF" Shorter than specific period / "VSS" Within specific period / "HIZ"
31	LPFN	Input	Low-pass filter amp inverted input terminal.
32	LPFO	Output	Low-pass filter amp output terminal.
33	PVREF	—	VREF terminal for PLL system.
34	VCOREF	Input	VCO center frequency standard level terminal. To be fixed to PVref usually.
35	VCOF	Output	VCO filter terminal.
36	AVSS	—	Analog system ground terminal.
37	SLCO	Output	Data slice level generation DAC output terminal.
38	RFI	Input	RF signal input terminal.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC802 VHiTC9462F/-1: Servo/Signal Control (TC9462F) (2/3)

Pin No.	Port Name	Input/Output	Function
39	AVDD	—	Analog system power terminal.
40	RFCT	Input	RFRP signal center level input terminal.
41	RFZI	Input	RFRP zero cross input terminal.
42	RFIP	Input	RF ripple signal input terminal.
43	FEI	Input	Focus error signal input terminal.
44	SBAD	Input	Sub-beam addition signal input terminal.
45	TSIN	Input	Test input terminal. To be fixed to Vref usually.
46	TEI	Input	Tacking error input terminal. (Tracking servo ON: Taking-in).
47	TEZI	Input	Tracking error, zero cross input terminal.
48	FOO	Output	Focus equalizer output terminal.
49	TRO	Output	Tracking equalizer output terminal.
50	VREF	—	Analog standard power terminal.
51	RFGC	Output	RF amplitude adjustment control signal output terminal. 3-value PWM signal is output. (PWM carrier = 88.2 kHz)
52	TEBC	Output	Tracking balance control signal output terminal. 3-value PWM signal is output. (PWM carrier = 88.2 kHz)
53	FMO	Output	Feed equalizer output terminal. 3-value PWM signal is output. (PWM carrier = 88.2 kHz)
54*	FVO	Output	Speed error signal or feed search EQ output terminal. 3-value PWM signal is output. (PWM carrier = 88.2 kHz)
55	DMO	Output	Disc equalizer output terminal. 3-value PWM signal is output. (PWM carrier = DSP system 88.2 kHz, sync with PXO)
56	2VREF	—	Analog standard power terminal (2xVREF)
57	SEL	Output	APC circuit ON/OFF signal output terminal. When laser is ON and UHS = L, "Hi-Z". When UHS = H, "H" output is obtained.
58*	FLGA	Output	Internal signal monitor external flag output terminal. TEZC, FOON, FOK and RFZC signals can be selected with command.
59*	FLGB	Output	Internal signal monitor external flag output terminal. DFCT, FOON, FMON and RFZC signals can be selected with command.
60*	FLGC	Output	Internal signal monitor external flag output terminal. TRON, TRSR, FOK, and SRCH signals can be selected with command.
61*	FLGD	Output	Internal signal monitor external flag output terminal. TRON, DMON, HYS and SHC signals can be selected with command.
62	VDD	—	Digital + power terminal.
63	VSS	—	Digital ground terminal.
64* 65* 66* 67*	IO0 IO1 IO2 IO3	Input/Output	General-use I/O port. The input port and output port can be selected with command. In case of input port the terminal state (H/L) can be read with the read command. In case of output port the terminal state (H/L/HiZ) can be controlled with command.
68*	/DMOUT	Input	Terminal to set the mode to output 2-value PWM of feed equalizer from IO0,1 terminal and 2-value PWM of disc equalizer from IO2,3 terminal. "L" active
69*	/CKSE	Input	To be opened usually.
70*	/DACT	Input	DAC test mode terminal. To be opened usually.
71	TESIN	Input	Test input terminal (externally provided VCO clock input terminal). To be fixed to "L" usually.
72	TESIO1	Input	Test input/output terminal. To be fixed to "L" usually.
73	VSS	—	Digital ground terminal.
74	PXI	Input	DSP system clock oscillation circuit input terminal. To be fixed to "L" usually.
75*	PXO	Output	DSP system clock oscillation circuit output terminal.
76	VDD	—	Digital + power terminal.
77	XVSS	—	System clock oscillation circuit ground terminal.
78	XI	Input	System clock oscillation input terminal.
79	XO	Output	System clock oscillation circuit output terminal.
80	XVDD	—	System clock oscillation circuit + power terminal.
81	DVSR	—	R channel D/A converting section power terminal.
82	RO	Output	R channel data forward rotation output terminal.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC802 VHiTC9462F/-1: Servo/Signal Control (TC9462F) (3/3)

Pin No.	Port Name	Input/Output	Function
83	DVDD	—	D/A converting section power terminal.
84	DVR	—	Reference voltage terminal.
85	LO	Output	L channel data forward rotation output terminal.
86	DVSL	—	L channel D/A converting section power terminal.
87*	TEST1	Input	Test mode terminal. To be opened usually.
88*	TEST2	Input	Test mode terminal. To be opened usually.
89*	TEST3	Input	Test mode terminal. To be opened usually.
90-93	BUS0-BUS3	Input/Output	Microcomputer interface data input/output terminal.
94	VDD	—	Digital + power terminal.
95	VSS	—	Digital ground terminal.
96	BUCK	Input	Microcomputer interface clock input terminal.
97	/CCE	Input	Microcomputer interface chip enable signal input terminal. "L": BUS0 to 3 is active.
98*	TEST4	Input	Test mode terminal. To be opened usually.
99*	/TSMOD	Input	Local test mode selection terminal.
100	/RST	Input	Reset signal input terminal. "L": Reset.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC802 VHiTC9462F/-1: Servo/Signal Control (TC9462F)

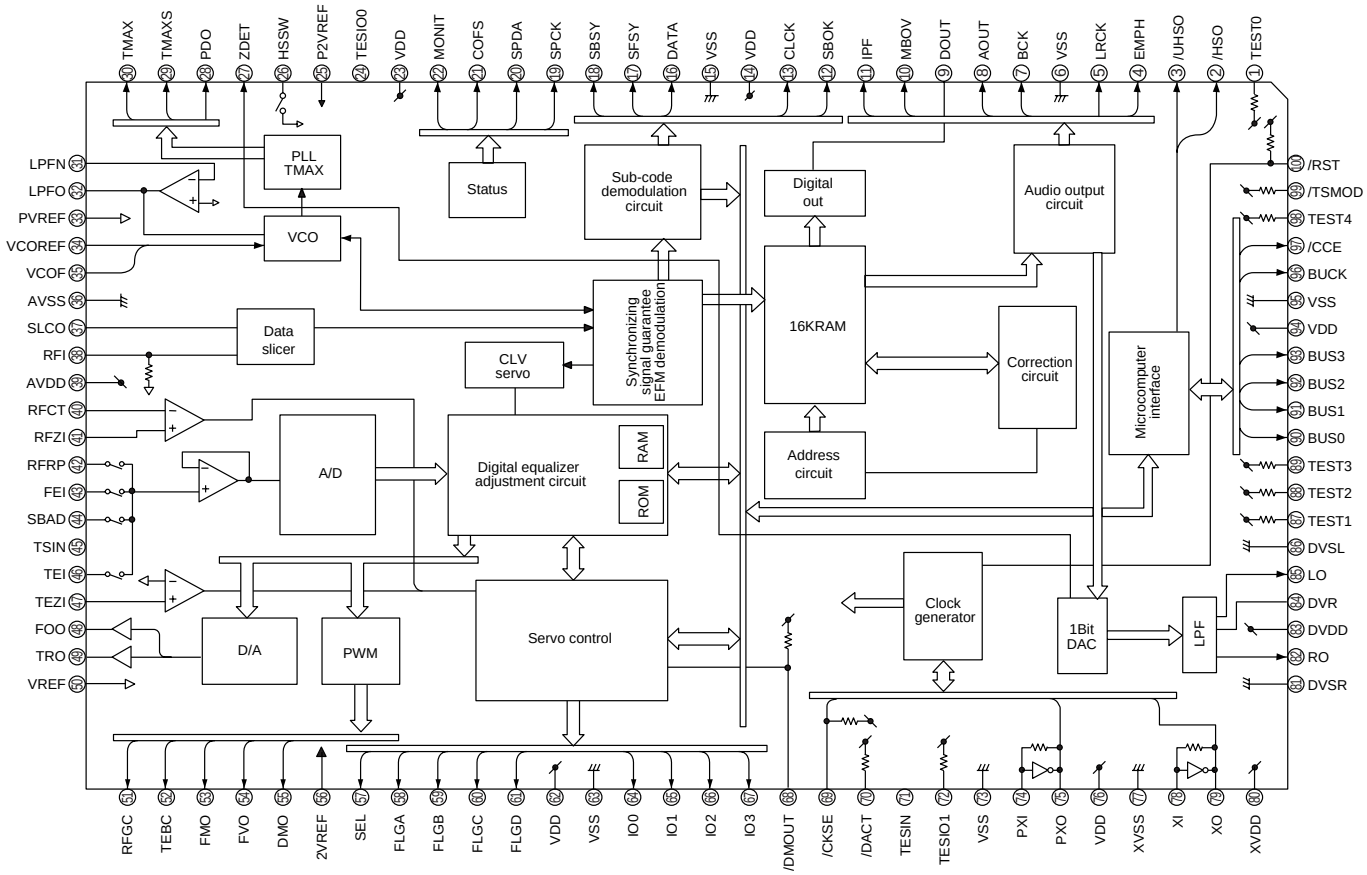


Figure 46 BLOCK DIAGRAM OF IC

IC804 VHiLA6541D/-1: Focus/Tracking/Spin/Sled Driver (LA6541D)

Pin No.	Port Name	Function
1	VCC	Power (short-circuited to pin 30)
2	MUTE	All BTL AMP output ON/OFF
3	VIN1	BTL AMP1 input terminal
4	VG1	BTL AMP1 input terminal (for gain adjustment)
5	VO1	BTL AMP1 output terminal (noninversion side)
6	VO2	BTL AMP1 output terminal (inversion side)
7	GND	GND terminal (lowest potential)
8	GND	GND terminal (lowest potential)
9	GND	GND terminal (lowest potential)
10	VO3	Output terminal of BTL AMP2 (inversion side)
11	VO4	Output terminal of BTL AMP2 (noninversion side)
12	VG2	Input terminal of BTL AMP2 (for gain adjustment)
13	VIN2	Input terminal of BTL AMP2
14	REG OUT	Connect the collector of externally provided transistor (PNP). 5V power output
15	REG IN	Connect the base of externally provided transistor (PNP).
16*	RES	Reset output
17*	CD	Reset output delay time setting (capacitor provided externally)
18	VIN3	Input terminal of BTL AMP3
19*	VG3	Input terminal of BTL AMP3 (for gain adjustment)
20	VO5	Output terminal of BTL AMP3 (noninversion side)
21	VO6	Output terminal of BTL AMP3 (inversion side)
22	GND	GND terminal (lowest potential)
23	GND	GND terminal (lowest potential)
24	GND	GND terminal (lowest potential)
25	VO7	Output terminal of BTL AMP4 (inversion side)
26	VO8	Output terminal of BTL AMP4 (noninversion side)
27	VG4	Input terminal of BTL AMP4 (for gain adjustment)
28	VIN4	Input terminal of BTL AMP4
29	VREF	Application of standard voltage of level shift circuit
30	VCC	Power (short-circuited to pin 1)

*GND (lowest potential) is connected to the frame of pin center.
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC804 VHiLA6541D/-1: Focus/Tracking/Spin/Sled Driver (LA6541D)

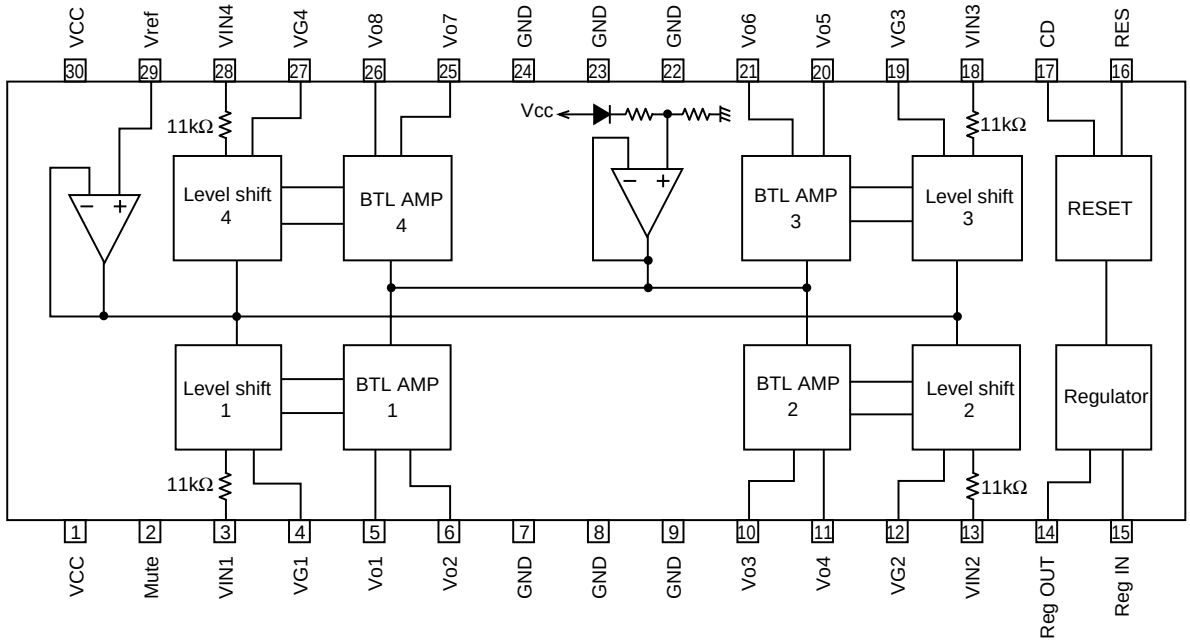
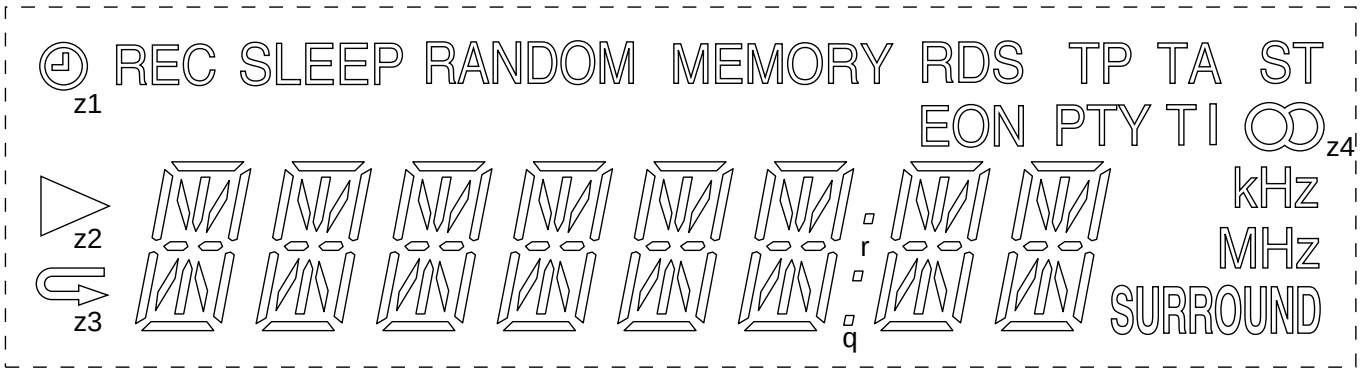


Figure 47 BLOCK DIAGRAM OF IC

LCD701: RV-LX0007SJZZ LCD Display



PinNo	com1	com2	com3	com4
1	com1			
2		com2		
3			com3	
4				com4
5	z1	b1	c1	z2
6	h1	j1	l1	k1
7	g1	n1	m1	d1
8	a1	p1	f1	e1
9	REC	b2	c2	z3
10	h2	j2	l2	k2
11	g2	n2	m2	d2
12	a2	p2	f2	e2
13	SLEEP	b3	c3	MHz
14	h3	j3	l3	k3
15	g3	n3	m3	d3
16	a3	p3	f3	e3
17	RANDOM	b4	c4	kHz
18	h4	j4	l4	k4
19	g4	n4	m4	d4
20	a4	p4	f4	e4
21	MEMORY	b5	c5	z4

PinNo	com1	com2	com3	com4
22	h5	j5	l5	k5
23	g5	n5	m5	d5
24	a5	p5	f5	e5
25	RDS	b6	c6	ST
26	h6	j6	l6	k6
27	g6	n6	m6	d6
28	a6	p6	f6	e6
29	r	b7	c7	q
30	h7	j7	l7	k7
31	g7	n7	m7	d7
32	a7	p7	f7	e7
33	TP	b8	c8	
34	h8	j8	l8	k8
35	g8	n8	m8	d8
36	a8	p8	f8	e8
37	EON	PTY	TI	TA
38				SRS(0)
39				com4
40			com3	
41		com2		
42	com1			

Figure 48 LCD SEGMENT

SHARP PARTS GUIDE

MICRO COMPONENT SYSTEM

MODEL XL-70

XL-70 Micro Component System consisting of XL-70 (main unit) and CP-XL70U (speaker system).

MODEL XL-70C

XL-70C Micro Component System consisting of XL-70C (main unit) and CP-XL70U (speaker system).

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. No.
3. PART NO.
4. DESCRIPTION

★ MARK: SPARE PARTS-DELIVERY SECTION

For U.S.A. only

Contact your nearest SHARP Parts Distributor to order.

For location of SHARP Parts Distributor,
Please call Toll-Free;
1-800-BE-SHARP

Explanation of capacitors/resistors parts codes

Capacitors

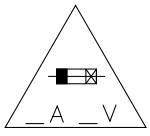
VCC ..... Ceramic type
VCK..... Ceramic type
VCT ..... Semiconductor type
VC • • MF ..... Cylindrical type (without lead wire)
VC • • MN..... Cylindrical type (without lead wire)
VC • • TV..... Square type (without lead wire)
VC • • TQ ..... Square type (without lead wire)
VC • • CY ..... Square type (without lead wire)
VC • • CZ ..... Square type (without lead wire)
VC • • • • • • • • • J .. The 13th character represents capacity difference.
("J" ±5%, "K" ±10%, "M" ±20%, "N" ±30%,
"C" ±0.25 pF, "D" ±0.5 pF, "Z" +80-20%.)

If there are no indications for the electrolytic capacitors, error is ±20%.

Resistors

VRD ..... Carbon-film type
VRS..... Carbon-film type
VRN ..... Metal-film type
VR • • MF ..... Cylindrical type (without lead wire)
VR • • MN..... Cylindrical type (without lead wire)
VR • • TV..... Square type (without lead wire)
VR • • TQ ..... Square type (without lead wire)
VR • • CY ..... Square type (without lead wire)
VR • • CZ ..... Square type (without lead wire)
VR • • • • • • • • • J .. The 13th character represents error.
("J" ±5%, "F" ±1%, "D" ±0.5%.)

If there are no indications for other parts, the resistors are ±5% carbon-film type.



CAUTION:FOR CONTINUED
PROTECTION AGAINST FIRE
HAZARD, REPLACE ONLY WITH
SAME TYPE F651, 4A, 125V/250V
F652, 1.6A, 125V/250V FUSES

ATTENTION:POUR ASSURER
UNE LONGUE PROTECTION CONTRE
UN INCENDIE, REMPLACER SEULEMENT
PAR UN FUSIBLE DE
TYPE F651, 4A, 125V/250V
F652, 1.6A, 125V/250V

NOTE:
Parts marked with "⚠" are important for maintaining the safety of the set.
Be sure to replace parts with specified ones for maintaining the safety and performance of the set.

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION

XL-70/70C

INTEGRATED CIRCUITS

IC101	VHIBA3126N/-1	J	AF	Head Selector,BA3126N
IC102	VHIBA3311L/-1	J	AK	REC./P.B.Equalizer Amp., BA3311L
IC301	VHITA7358AP-1	J	AG	FM Front End,TA7358AP
IC302	VHILC72131/-1	J	AP	PLL (Tuner),LC72131
IC303	VHILA1832S/-1	J	AN	FM IF Det./FM Mpx./AM IF, LA1832S
IC401	VHILC75342M-1	J	AN	Function/Volume Equalizer, LC75342M
IC601	VHILA4451//-1	J	AN	Power Amp.,LA4451
IC701	RH-IX0026SJZZ	J	AX	System Control Microcomputer, IX0026SJ
IC702	VHITA7291S/-1	J	AH	Loading Motor Driver,TA7291S
IC801	VHITA2109F/-1	J	AL	Servo Pre Amp.,TA2109F
IC802	VHITC9462F/-1	J	AZ	Servo/Signal Control,TC9462F
IC804	VHILA6541D/-1	J	AW	Focus/Tracking/Spin/Sled Driver,LA6541D
IC805	VHITA7291S/-1	J	AH	CD Motor Driver,TA7291S

TRANSISTORS

Q101~106	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q151	VS2SC2001-K-1	J	AD	Silicon,NPN,2SC2001 K
Q152	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q153	VSKRC104M//-1	J	AC	Digital,NPN,KRC104 M
Q171	VSKRA102M//-1	J	AC	Digital,PNP,KRA102 M
Q172	VSKRC102M//-1	J	AC	Digital,NPN,KRC102 M
Q305,306	VS2SC535-C/-1	J	AC	Silicon,NPN,2SC535 C
Q351	VSKRC104M//-1	J	AC	Digital,NPN,KRC104 M
Q360	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q601~603	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q604,605	VS2SD2012Y/-1	J	AF	Silicon,NPN,2SD2012 Y
Q606	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q607	VS2SD2012Y/-1	J	AF	Silicon,NPN,2SD2012 Y
Q608	VSKRA102M//-1	J	AC	Digital,PNP,KRA102 M
Q609	VSKRC107M//-1	J	AC	Digital,NPN,KRC107 M
Q681,682	VS2SD468-C/-1	J	AD	Silicon,NPN,2SD468 C
Q683	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q701	VSKRC102M//-1	J	AC	Digital,NPN,KRC102 M
Q702,703	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q706	VSKRC102M//-1	J	AC	Digital,NPN,KRC102 M
Q707,708	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q709	VSKRC102M//-1	J	AC	Digital,NPN,KRC102 M
Q801	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q861	VS2SB562-C/-1	J	AD	Silicon,PNP,2SB562 C
Q901	VSKRC102M//-1	J	AC	Digital,NPN,KRC102 M
Q902	VS2SB562-C/-1	J	AD	Silicon,PNP,2SB562 C
Q903	VSKRC107M//-1	J	AC	Digital,NPN,KRC107 M
Q904	VSKRC102M//-1	J	AC	Digital,NPN,KRC102 M
Q905	VS2SB562-C/-1	J	AD	Silicon,PNP,2SB562 C
Q906	VSKRA102M//-1	J	AC	Digital,PNP,KRA102 M

DIODES

D104	VHD1N4148//-1	J	AA	Silicon,1N4148
D301,302	VHD1N4148//-1	J	AA	Silicon,1N4148
D305,306	VHD1N4148//-1	J	AA	Silicon,1N4148
D401~403	VHD1N4004//-1	J	AB	Silicon,1N4004
D522	VHD1N4148//-1	J	AA	Silicon,1N4148
D601~604	VHD1N4148//-1	J	AA	Silicon,1N4148
D611~614	VHD1N4004//-1	J	AB	Silicon,1N4004
⚠ D651~654	VHD1N5402M/-1	J	AE	Silicon,1N5402M
⚠ D656~659	VHD1N4004//-1	J	AB	Silicon,1N4004
⚠ D681~684	VHD1N4004//-1	J	AB	Silicon,1N4004
D685	VHD1N4004//-1	J	AB	Silicon,1N4004
D701~709	VHPMPG3372X-V	J	AD	LED,Green,MPG3372X
D720~723	VHD1N4148//-1	J	AA	Silicon,1N4148
D730	VHPHY2043//-1	J	AD	LED,Orange,HY2043
D732	VHPHY2043//-1	J	AD	LED,Orange,HY2043
D736,737	VHPHY2043//-1	J	AD	LED,Orange,HY2043
D901~904	VHD1N4148//-1	J	AA	Silicon,1N4148
ZD351	VHEMTZJ5R1B-1	J	AC	Zener,5.1V,MTZJ5.1B
ZD601	VHEMTZJ130A-1	J	AC	Zener,13V,MTZJ13A
ZD602	VHEMTZJ7R5C-1	J	AC	Zener,7.5V,MTZJ7.5C
ZD681	VHEMTZJ6R8A-1	J	AA	Zener,6.8V,MTZJ6.8A
ZD682	VHEMTZJ5R6B-1	J	AD	Zener,5.6V,MTZJ5.6B
ZD701	VHEMTZJ3R3B-1	J	AA	Zener,3.3V,MTZJ3.3B

FILTERS

BF301	RFILR0008AWZZ	J	AE	Band Pass Filter
CF302,303	RFILF0004SJZZ	J	AG	FM RF,10.7 MHz
CF351	RFILF0003AWZZ	J	AK	FM IF

TRANSFORMERS

CF352	RFILA0003SJZZ	J	AF	AM IF
T304	RCILI0005SJZZ	J	AF	FM IF
T351	RCILI0004SJZZ	J	AF	AM IF
⚠ T651	RTRNP0044SJZZ	J	AZ	Power,Main
⚠ T681	RTRNP0023SJZZ	J	AZ	Power,Sub

COILS

L151	VP-MK331K0000	J	AB	330 µH,Choke
L302	RCILR0003SJZZ	J	AD	FM RF
L303	RCILB0010SJZZ	J	AG	FM Oscillation
L351,352	VP-DH101K0000	J	AB	100 µH,Choke
L353	VP-DH102K0000	J	AB	1 mH,Choke
L701	VP-DH101K0000	J	AB	100 µH,Choke
L801	VP-DH100K0000	J	AB	10 µH,Choke
L802	VP-XHR82K0000	J	AC	0.82 µH
L803	VP-DH100K0000	J	AB	10 µH,Choke
L804	VP-DH2R2K0000	J	AB	2.2 mmH,Peaking
T302	RCILA0007SJZZ	J	AG	AM Antenna
T306	RCILB0009SJZZ	J	AG	AM Oscillation

VARIABLE RESISTOR

VR351	RVR-M0999AFZZ	J	AB	10 kohm (B),Semi-VR [FM Mute Level]

VARIABLE CAPACITORS

VD301	VHCSVC348S/-1	J	AK	Variable Capacitance,SVC348S
VD302,303	VHCKDV147B/-1	J	AH	Variable Capacitance, KDV147B

VIBRATORS

X351	RCRM-0007SJZZ	J	AG	Ceramic,456 kHz
X352	RCRSP0006SJZZ	J	AF	Crystal,4.5 MHz
X701	RCRM-0008SJZZ	J	AG	Ceramic,8 MHz
X702	RCRSP0011AWZZ	J	AC	Crystal,32.768 kHz
X801	RCRSP0002SJZZ	J	AL	Crystal,16.9344 MHz

CAPACITORS

C101,102	VCKYTV1HB102K	J	AA	0.001 µF,50V
C103,104	VCKYTV1HB331K	J	AA	330 pF,50V
C105,106	VCKYTV1HB271K	J	AA	270 pF,50V
C107,108	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C109,110	VCQYKA1HM153J	J	AB	0.015 µF,50V,Mylar
C111,112	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C113,114	RC-GZA475AF1E	J	AB	4.7 µF,25V,Electrolytic
C115,116	VCKYTV1HB222K	J	AA	0.0022 µF,50V
C117	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C121,122	VCCSTV1HL820J	J	AA	82 pF,50V
C123	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
C125	RC-GZA107AF1E	J	AB	100 µF,25V,Electrolytic
C126	RC-GZA226AF1C	J	AB	22 µF,16V,Electrolytic
C129,130	RC-GZA475AF1E	J	AB	4.7 µF,25V,Electrolytic
C153	VCQPKA2AA392J	J	AB	0.0039 µF,100V,Polypropylene
C154	VCQYKA1HM273J	J	AB	0.027 µF,50V,Mylar
C155	RC-GZA107AF1C	J	AB	100 µF,16V,Electrolytic
C301	VCKYTV1HB102K	J	AA	0.001 µF,50V
C303	VCKYTV1HB102K	J	AA	0.001 µF,50V
C304	VCKYTV1EF103Z	J	AA	0.01 µF,25V
C305	VCKYTV1HB472K	J	AA	0.0047 µF,50V
C306	VCCUTV1HJ9R0D	J	AD	9 pF (UJ),50V
C307	VCKYTV1HB472K	J	AA	0.0047 µF,50V
C308	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C309	VCKYTV1HB102K	J	AA	0.001 µF,50V
C310	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C311	VCCCTV1HH100J	J	AA	10 pF (CH),50V
C312	VCCSTV1HL330J	J	AA	33 pF,50V

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
C313	VCCUTV1HJ6R0D	J	AA	6 pF (UJ),50V
C314	VCCCTV1HH220J	J	AA	22 pF (CH),50V
C315	VCKYTV1HB101K	J	AA	100 pF,50V
C316	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C317	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C318	VCCSTV1HL5R0J	J	AA	5 pF,50V
C319	VCCCTV1HH180J	J	AA	18 pF (CH),50V
C329	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C330	VCCCPA1HH120J	J	AA	12 pF (CH),50V
C331	VCKYTV1EF473Z	J	AB	0.047 µF,25V
C332	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C334	VCCUPA1HJ270J	J	AA	27 pF (UJ),50V
C335	VCKYTV1HB561K	J	AA	560 pF,50V
C337	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C340	VCKYTV1HB102K	J	AA	0.001 µF,50V
C343,344	VCCSTV1HL330J	J	AA	33 pF,50V
C349	VCKYTV1HB102K	J	AA	0.001 µF,50V
C350,351	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C352	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C353,354	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C355	VCCSTV1HL220J	J	AA	22 pF,50V
C356	VCKYTV1HB102K	J	AA	0.001 µF,50V
C357	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
C358	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C360,361	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C362	RC-GZA335AF1H	J	AB	3.3 µF,50V,Electrolytic
C363	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C364	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C365	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C366	VCKYTV1HB102K	J	AA	0.001 µF,50V
C367,368	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C369	VCCSTV1HL560J	J	AA	56 pF,50V
C370~372	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C373,374	VCTYPA1CX223K	J	AA	0.022 µF,16V
C376	VCKYTV1HB102K	J	AA	0.001 µF,50V
C380	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C381	VCCCTV1HH120J	J	AA	12 pF (CH),50V
C382	VCCCTV1HH150J	J	AA	15 pF (CH),50V
C383	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C384	VCKYTV1HB102K	J	AA	0.001 µF,50V
C385	VCTYPA1CX103K	J	AA	0.01 µF,16V
C386	VCKYPA1HB331K	J	AA	330 pF,50V
C387	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C391	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C392	VCKYTV1HB102K	J	AA	0.001 µF,50V
C393	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C394	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C395	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C396	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C397	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C398	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C399	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C401~408	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C411,412	VCKYTV1HB331K	J	AA	330 pF,50V
C413	VCKYTV1HB102K	J	AA	0.001 µF,50V
C414	RC-GZA474AF1H	J	AA	0.47 µF,50V,Electrolytic
C415,416	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C417,418	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
C419,420	VCKYTV1HB272K	J	AA	0.0027 µF,50V
C421~424	RC-QZA104AFYJ	J	AC	0.1 µF,50V,Mylar
C425,426	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C429	RC-GZA336AF1C	J	AB	33 µF,16V,Electrolytic
C430	RC-GZA107AF1C	J	AB	100 µF,16V,Electrolytic
C601	RC-GZA336AF1C	J	AB	33 µF,16V,Electrolytic
C602	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C603,604	VCKYPA1HB101K	J	AA	100 pF,50V
C605,606	RC-GZA475AF1E	J	AB	4.7 µF,25V,Electrolytic
C607,608	RC-GZA227AF1E	J	AB	220 µF,25V,Electrolytic
C609,610	RC-GZA476AF1H	J	AB	47 µF,50V,Electrolytic
C611,612	RC-QZA104AFYJ	J	AC	0.1 µF,50V,Mylar
C613,614	RC-GZV108AF1V	J	AD	1000 µF,35V,Electrolytic
C615	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C616	RC-GZW228AF1H	J	AH	2200 µF,50V,Electrolytic
C620	RC-GZV477AF1E	J	AC	470 µF,25V,Electrolytic
C621	RC-GZA107AF1E	J	AB	100 µF,25V,Electrolytic
C622	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C624	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C625	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C626	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C627	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C629	RC-GZV227AF1H	J	AC	220 µF,50V,Electrolytic
C630	RC-GZW478AF1E	J	AG	4700 µF,25V,Electrolytic
C639,640	VCKYPA1HB102K	J	AA	0.001 µF,50V
C647	VCKYBT1HB331K	J	AA	330 pF,50V
C648	VCKYPA1HB122K	J	AA	0.0012 µF,50V
⚠ C651	VCFYFA1HA104J	J	AC	0.1 µF,50V,Thin Film
⚠ C654	VCFYFA1HA104J	J	AC	0.1 µF,50V,Thin Film
⚠ C656~659	VCFYFA1HA104J	J	AC	0.1 µF,50V,Thin Film
C660	VCKYPA1HB102Z	J		0.001 µF,50V
C683	RC-GZV228AF1C	J	AG	2200 µF,16V,Electrolytic
C684	VCFYDA1HA473J	J	AB	0.047 µF,50V,Thin Film
C685	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C686	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C688	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C689	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C695,696	VCKYPA1HB102K	J	AA	0.001 µF,50V
C701,702	VCCCTV1HH220J	J	AA	22 pF (CH),50V
C703,704	VCKYTV1EF223Z	J	AA	0.022 µF,25V
C705,706	VCKYTV1HB102K	J	AA	0.001 µF,50V
C710	VCKYTV1EB103K	J	AA	0.01 µF,25V
C711	RC-GZA335AF1H	J	AB	3.3 µF,50V,Electrolytic
C712	VCKYTV1EB103K	J	AA	0.01 µF,25V
C713	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C714	VCKYTV1HB561K	J	AA	560 pF,50V
C715	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C771	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C772	VCKYTV1EB104K	J	AA	0.1 µF,25V
C773	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C801	VCCSPA1HL101J	J	AA	100 pF,50V
C802	VCKYTV1EB153K	J	AB	0.015 µF,25V
C803	RC-GZA476AF1A	J	AB	47 µF,10V,Electrolytic
C804	VCKYTV1EB103K	J	AA	0.01 µF,25V
C805	VCKYTV1HB272K	J	AA	0.0027 µF,50V
C806	VCKYTV1HB472K	J	AA	0.0047 µF,50V
C807	VCKYTV1EB333K	J	AB	0.033 µF,25V
C809	VCKYTV1HB472K	J	AA	0.0047 µF,50V
C810	VCKYTV1HB102K	J	AA	0.001 µF,50V
C811	RC-GZA476AF1A	J	AB	47 µF,10V,Electrolytic
C812	VCKYTV1EF103Z	J	AA	0.01 µF,25V
C813	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C817~819	VCKYTV1EB104K	J	AA	0.1 µF,25V
C820	VCKYTV1EF103Z	J	AA	0.01 µF,25V
C821	VCKYTV1EB104K	J	AA	0.1 µF,25V
C822	RC-GZA227AF1A	J	AB	220 µF,10V,Electrolytic
C823	VCKYTV1EF103Z	J	AA	0.01 µF,25V
C824,825	VCKYTV1EB563K	J	AA	0.056 µF,25V
C826,827	VCCCTV1HH150J	J	AA	15 pF (CH),50V
C828,829	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C830	VCKYTV1EB563K	J	AA	0.056 µF,25V
C831,832	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C833,834	VCKYTV1HB471K	J	AA	470 pF,50V
C835	VCKYTV1EB563K	J	AA	0.056 µF,25V
C836	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C837	VCKYTV1HB471K	J	AA	470 pF,50V
C838	RC-GZA476AF1A	J	AB	47 µF,10V,Electrolytic
C839	VCCSTV1HL2R0C	J	AA	2 pF,50V
C840,841	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C842	RC-GZA476AF1A	J	AB	47 µF,10V,Electrolytic
C843	VCKYTV1EF104Z	J	AA	0.1 µF,25V
C844	VCKYTV1HB682K	J	AA	0.0068 µF,50V
C845	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C846,847	VCKYTV1EF104Z	J	AA	0.1 µF,25V
C848	VCCSTV1HL390J	J	AA	39 pF,50V
C849	VCKYTV1EB563K	J	AA	0.056 µF,25V
C850	RC-GZA227AF1A	J	AB	220 µF,10V,Electrolytic
C851	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C852	VCQYKA1HM222J	J	AB	0.0022 µF,50V,Mylar
C855	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C857	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C859	RC-GZA477AF1A	J	AC	470 µF,10V,Electrolytic
C860	VCKYTV1EF104Z	J	AA	0.1 µF,25V
C861	VCKYPA1HB102K	J	AA	0.001 µF,50V
C862	VCKYPA1HB222K	J	AA	0.0022 µF,50V
C863	VCKYTV1HB471K	J	AA	470 pF,50V
C871	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C872	VCKYTV1EB104K	J	AA	0.1 µF,25V
C887	VCKYTV1HB272K	J	AA	0.0027 µF,50V
C901	VCKYTV1HB102K	J	AA	0.001 µF,50V
C902	RC-GZA335AF1H	J	AB	3.3 µF,50V,Electrolytic
C903	RC-GZA107AF1E	J	AB	100 µF,25V,Electrolytic
C904,905	VCKYTV1HF223Z	J	AA	0.022 µF,50V

RESISTORS

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
	VRS-TV2AB000J	J	AA	0 ohm,Jumper,1.25×2mm,Green
R7A0	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R7A1	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R7A2	VRS-TV2AB104J	J	AA	100 kohm,1/10W
R7A3	VRD-ST2EE101J	J	AA	100 ohm,1/4W
R7A4	VRS-TV2AB121J	J	AA	120 ohms,1/10W
R7A5	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R7A6	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R7A7	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R7A8	VRS-TV2AB820J	J	AA	82 ohms,1/10W
R7A9	VRD-ST2CD332J	J	AA	3.3 kohms,1/6W
R7B0	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R7B2	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R7B3	VRS-TV2AB222J	J	AA	2.2 kohms,1/10W
R7D1	VRS-TV2AB820J	J	AA	82 ohms,1/10W
R7D2	VRS-TV2AB820J	J	AA	82 ohms,1/10W
R7D3	VRS-TV2AB820J	J	AA	82 ohms,1/10W
R7D4	VRS-TV2AB820J	J	AA	82 ohms,1/10W
R7D5	VRS-TV2AB820J	J	AA	82 ohms,1/10W
R7D6	VRS-TV2AB820J	J	AA	82 ohms,1/10W
R7D8	VRS-TV2AB820J	J	AA	82 ohms,1/10W
R7D9	VRS-TV2AB820J	J	AA	82 ohms,1/10W
R7E1	VRS-TV2AB820J	J	AA	82 ohms,1/10W
R80A	VRS-TV2AB823J	J	AA	82 kohms,1/10W
R80B	VRS-TV2AB683J	J	AA	68 kohms,1/10W
R80C	VRS-TV2AB823J	J	AA	82 kohms,1/10W
R80E	VRD-ST2CD823J	J	AA	82 kohms,1/6W
R80F	VRS-TV2AB823J	J	AA	82 kohms,1/10W
R80G	VRD-ST2CD683J	J	AA	68 kohms,1/6W
R101,102	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R103,104	VRS-TV2AB121J	J	AA	120 ohms,1/10W
R105	VRS-TV2AB154J	J	AA	150 kohms,1/10W
R106	VRD-ST2CD154J	J	AA	150 kohms,1/6W
R107	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R108	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R109,110	VRS-TV2AB392J	J	AA	3.9 kohms,1/10W
R111,112	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
R113,114	VRS-TV2AB332J	J	AA	3.3 kohms,1/10W
R115,116	VRS-TV2AB153J	J	AA	15 kohms,1/10W
R117,118	VRS-TV2AB223J	J	AA	22 kohms,1/10W
R119,120	VRS-TV2AB101J	J	AA	100 ohm,1/10W
R121~124	VRS-TV2AB472J	J	AA	4.7 kohms,1/10W
R125	VRS-TV2AB104J	J	AA	100 kohm,1/10W
R126	VRS-TV2AB562J	J	AA	5.6 kohms,1/10W
R131	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
R132	VRS-TV2AB472J	J	AA	4.7 kohms,1/10W
R133	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R134	VRS-TV2AB104J	J	AA	100 kohm,1/10W
R138	VRD-ST2EE331J	J	AA	330 ohms,1/4W
R139	VRD-ST2CD272J	J	AA	2.7 kohms,1/6W
R140	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R141	VRD-ST2CD331J	J	AA	330 ohms,1/6W
R151	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R152	VRS-TV2AB104J	J	AA	100 kohm,1/10W
R153,154	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R155	VRD-ST2EE560J	J	AA	56 ohms,1/4W
R156,157	VRD-ST2EE151J	J	AA	150 ohms,1/4W
R301	VRD-ST2EE220J	J	AA	22 ohms,1/4W
R302	VRS-TV2AB104J	J	AA	100 kohm,1/10W
R303	VRD-ST2CD333J	J	AA	33 kohms,1/6W
R304	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R305	VRS-TV2AB681J	J	AA	680 ohms,1/10W
R306	VRS-TV2AB100J	J	AA	10 ohm,1/10W
R307	VRD-ST2EE470J	J	AA	47 ohms,1/4W
R308	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R309	VRD-ST2EE471J	J	AA	470 ohms,1/4W
R310	VRS-TV2AB472J	J	AA	4.7 kohms,1/10W
R312	VRS-TV2AB222J	J	AA	2.2 kohms,1/10W
R313	VRS-TV2AB681J	J	AA	680 ohms,1/10W
R314	VRS-TV2AB330J	J	AA	33 ohms,1/10W
R315	VRD-ST2CD330J	J	AA	33 ohms,1/6W
R316	VRS-TV2AB331J	J	AA	330 ohms,1/10W
R323	VRS-TV2AB683J	J	AA	68 kohms,1/10W
R336	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R350	VRS-TV2AB272J	J	AA	2.7 kohms,1/10W
R351	VRS-TV2AB562J	J	AA	5.6 kohms,1/10W
R352	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R353	VRS-TV2AB271J	J	AA	270 ohms,1/10W
R355	VRS-TV2AB332J	J	AA	3.3 kohms,1/10W
R356	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R357	VRS-TV2AB474J	J	AA	470 kohms,1/10W
R358	VRS-TV2AB822J	J	AA	8.2 kohms,1/10W
R359	VRS-TV2AB182J	J	AA	1.8 kohms,1/10W
R360	VRS-TV2AB472J	J	AA	4.7 kohms,1/10W
R361,362	VRS-TV2AB123J	J	AA	12 kohms,1/10W
R363	VRD-ST2CD332J	J	AA	3.3 kohms,1/6W
R364	VRS-TV2AB332J	J	AA	3.3 kohms,1/10W
R365	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R366	VRS-TV2AB222J	J	AA	2.2 kohms,1/10W
R371~374	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R376	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R377	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R379	VRS-TV2AB222J	J	AA	2.2 kohms,1/10W
R380	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
R381	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R382	VRD-ST2EE331J	J	AA	330 ohms,1/4W
R383	VRS-TV2AB562J	J	AA	5.6 kohms,1/10W
R384	VRD-ST2CD682J	J	AA	6.8 kohms,1/6W
R385	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R386	VRD-ST2EE331J	J	AA	330 ohms,1/4W
R387	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R391,392	VRD-ST2EE391J	J	AA	390 ohms,1/4W
R393	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R395	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R405,406	VRS-TV2AB273J	J	AA	27 kohms,1/10W
R407,408	VRS-TV2AB152J	J	AA	1.5 kohms,1/10W
R410,411	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R412,413	VRS-TV2AB273J	J	AA	27 kohms,1/10W
R415~425	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R435,436	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R437,438	VRS-TV2AB682J	J	AA	6.8 kohms,1/10W
R439,440	VRS-TV2AB392J	J	AA	3.9 kohms,1/10W
R601,602	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R603,604	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R605,606	VRD-ST2CD820J	J	AA	82 ohms,1/6W
R607	VRD-ST2CD682J	J	AA	6.8 kohms,1/6W
R608	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R609,610	VRD-ST2EE3R3J	J	AA	3.3 ohms,1/4W
R613,614	VRD-RT2HD271J	J	AA	270 ohms,1/2W
R615,616	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
R617	VRS-TV2AB333J	J	AA	33 kohms,1/10W
R619,620	VRD-ST2EE470J	J	AA	47 ohms,1/4W
R621	VRS-TV2AB223J	J	AA	22 kohms,1/10W
R623	VRS-TV2AB223J	J	AA	22 kohms,1/10W
R624	VRD-ST2EE102J	J	AA	1 kohm,1/4W
R625	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R627	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R628	VRD-ST2EE101J	J	AA	100 ohm,1/4W
R629	VRD-ST2EE821J	J	AA	820 ohms,1/4W
R634	VRD-ST2EE332J	J	AA	3.3 kohms,1/4W
R651	VRS-VV3LA681J	J	AC	680 kohms,3W,Metal Oxide Film
R652	RR-HZ0001AWZZ	J	AE	4.7 Mohms,1/2W
R661,662	VRD-ST2EE331J	J	AA	330 ohms,1/4W
R681	VRD-ST2CD470J	J	AA	47 ohms,1/6W
R682	VRD-ST2CD122J	J	AA	1.2 kohms,1/6W
R683	VRD-ST2CD470J	J	AA	47 ohms,1/6W
R684	VRD-ST2CD122J	J	AA	1.2 kohms,1/6W
R685	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R686	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R701	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R702	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R705	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R706	VRD-ST2CD392J	J	AA	3.9 kohms,1/6W
R707	VRD-ST2CD272J	J	AA	2.7 kohms,1/6W
R708	VRS-TV2AB222J	J	AA	2.2 kohms,1/10W
R709	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
R710,711	VRS-TV2AB122J	J	AA	1.2 kohms,1/10W
R719,720	VRD-ST2CD122J	J	AA	1.2 kohms,1/6W
R721,722	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R723	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R724	VRS-TV2AB822J	J	AA	8.2 kohms,1/10W
R725	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R727	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R728	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R729	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R731~735	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R737~746	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R747~749	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R750,751	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R753,754	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R757~759	VRS-TV2AB102J	J	AA	1 kohm,1/10W

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
R761~777	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R778~781	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R782,783	VRS-TV2AB333J	J	AA	33 kohms,1/10W
R784	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R785	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R786	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R787	VRD-RT2HD2R2J	J	AA	2.2 ohms,1/2W
R789	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R792	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R793	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
R794~797	VRD-ST2CD181J	J	AA	180 ohms,1/6W
R798	VRD-ST2CD822J	J	AA	8.2 kohms,1/6W
R799	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
R801	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R802	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R804	VRS-TV2AB104J	J	AA	100 kohm,1/10W
R806	VRS-TV2AB153J	J	AA	15 kohms,1/10W
R807	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R808	VRS-TV2AB332J	J	AA	3.3 kohms,1/10W
R809	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R810	VRS-TV2AB332J	J	AA	3.3 kohms,1/10W
R811	VRS-TV2AB222J	J	AA	2.2 kohms,1/10W
R812	VRS-TV2AB332J	J	AA	3.3 kohms,1/10W
R813	VRD-ST2EE100J	J	AA	10 ohm,1/4W
R814	VRS-TV2AB332J	J	AA	3.3 kohms,1/10W
R815,816	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R817,818	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R819	VRD-ST2CD221J	J	AA	220 ohms,1/6W
R820	VRS-TV2AB102J	J	AA	1 kohm,1/10W
R821	VRD-ST2CD151J	J	AA	150 ohms,1/6W
R822	VRD-ST2EE220J	J	AA	22 ohms,1/4W
R823	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R824	VRS-TV2AB273J	J	AA	27 kohms,1/10W
R825	VRS-TV2AB823J	J	AA	82 kohms,1/10W
R826	VRS-TV2AB272J	J	AA	2.7 kohms,1/10W
R827	VRS-TV2AB273J	J	AA	27 kohms,1/10W
R828	VRS-TV2AB122J	J	AA	1.2 kohms,1/10W
R829	VRD-ST2CD683J	J	AA	68 kohms,1/6W
R843	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R851	VRD-ST2CD331J	J	AA	330 ohms,1/6W
R852~855	VRS-TV2AB104J	J	AA	100 kohm,1/10W
R861~863	VRS-TV2AB222J	J	AA	2.2 kohms,1/10W
R872	VRD-RT2HD2R2J	J	AA	2.2 ohms,1/2W
R873	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R874	VRS-TV2AB222J	J	AA	2.2 kohms,1/10W
R876	VRS-TV2AB154J	J	AA	150 kohms,1/10W
R877	VRS-TV2AB683J	J	AA	68 kohms,1/10W
R880	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R901	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
R902	VRD-ST2CD563J	J	AA	56 kohms,1/6W
R903	VRS-TV2AB473J	J	AA	47 kohms,1/10W
R904	VRS-TV2AB271J	J	AA	270 ohms,1/10W
R905	VRS-TV2AB103J	J	AA	10 kohm,1/10W
R906	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
R907	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R909	VRS-TV2AB183J	J	AA	18 kohms,1/10W
R910	VRS-TV2AB333J	J	AA	33 kohms,1/10W

OTHER CIRCUITRY PARTS

BI605/CNS605	QCNWN0179SJZZ	J	AF	Connector Ass'y,7/7Pin
BI651/CNS651	QCNWN0177SJZZ	J	AC	Connector Ass'y,2/2Pin
BI652/CNS652	QCNWN0194SJZZ	J	AC	Connector Ass'y,2/2Pin
BI702/CNS702	QCNWN0181SJZZ	J	AF	Connector Ass'y,13/13Pin
BI706/CNS706	QCNWN0185SJZZ	J	AC	Connector Ass'y,3/3Pin
BI707/CNS707	QCNWN0125SJZZ	J	AE	Connector Ass'y,3/3Pin
BI801/CNS801	QCNWN0186SJZZ	J	AF	Connector Ass'y,8/8Pin
BI802/CNS802	QCNWN0187SJZZ	J	AE	Connector Ass'y,7/7Pin
BI803/CNS803	QCNWN0188SJZZ	J	AE	Connector Ass'y,6/6Pin
BI805/CNS805	QCNWN0189SJZZ	J	AD	Connector Ass'y,3/3Pin
BI901/CNS901	QCNWN0176SJZZ	J	AE	Connector Ass'y,7/7Pin
CFM901	————		—	Flat Wire,2Pin (Supplies at REF.No.PWB-D)
CFW601	QCNWN0201SJZZ	J	AB	Flat Wire,5Pin
CFW701	QCNWN0200SJZZ	J	AB	Flat Wire,2Pin
CFW704	QCNWN0190SJZZ	J	AE	Flat Wire,9Pin
CFW806	QCNWN0191SJZZ	J	AB	Flat Wire,3Pin
CFW807	QCNWN0182SJZZ	J	AB	Flat Wire,2Pin
CNP101	QCNCM931HAFZZ	J	AC	Plug,8Pin
CNP301	QCNCM602BAFZZ	J	AA	Plug,2Pin
CNP604	QCNCM010NAWZZ	J	AC	Plug,13Pin
CNP605	QCNCM705GAFZZ	J	AB	Plug,7Pin
CNP651	QCNCM998BAFZZ	J	AC	Plug,2Pin
CNP652,653	QCNCM998BAFZZ	J	AC	Plug,2Pin
CNP681	QCNCM603CAFZZ	J	AB	Plug,3Pin
CNP702	QCNCM004NSJZZ	J	AC	Plug,13Pin
CNP703	QCNCM010LAWZZ	J	AC	Plug,11Pin
CNP705	QCNCM932BAFZZ	J	AA	Plug,2Pin
CNP706	QCNCM932CAFZZ	J	AA	Plug,3Pin
CNP803	QCNCM932FAFZZ	J	AC	Plug,6Pin
CNP804	QCNCM931BAFZZ	J	AA	Plug,2Pin
CNP805	QCNCM999CAFZZ	J	AG	Plug,3Pin
CNP901	————		—	Plug,7Pin (Supplies at REF.No.PWB-D)
CNS101	QCNWN0175SJZZ	J	AG	Connector Ass'y,8Pin
CNS604	QCNCW010NAWZZ	J	AC	Socket,13Pin
CNS703	QCNCW010LAWZZ	J	AD	Socket,11Pin
CNS704	QCNCW623JAFZZ	J	AC	Socket,9Pin
CNS705	QCNWN0184SJZZ	J		Connector Ass'y,2Pin
CNS804	QCNWN0193SJZZ	J	AB	Connector Ass'y,2Pin
⚠F651	QFS-D402BSJNI	J	AB	Fuse,4A 125V
⚠F652	QFS-D162BSJNI	J	AE	Fuse,1.6A 125V
J601	QJAKM0001SJZZ	J	AG	Jack,Headphones
J801	VHPGP1F32T/-1	J	AP	Jack,CD Digital Output
LCD701	RV-LX0007SJZZ	J	AR	LCD Display
M701	RMOTV0409AFZZ	J	AL	Motor [JOG]
M801	RMOTV0409AFZZ	J	AL	Motor [CD Lid]
M901(237-9)	9GD192112344	J	AY	Motor with Pulley [Tape]
NM801	RMOTV0409AFM1	J	AN	Motor with Gear [Sled]
NM802	RMOTV0408AFM3	J	AN	Motor with Chassis [Spindle]
NSW801	QSW-F9001AWZZ	J	AE	Switch,Push Type [Pickup In]
PH901	————		—	Photo Interrupter (Supplies at REF.No.PWB-E)
⚠RLY601	RRLYD0004SJZZ	J	AG	Relay
RX701	VHLN64H380A-1	J	AK	Remote Sensor,N64H380A
SO301	QTANC0001SJZZ	J	AF	Socket,FM Antenna
SO401	QSOCJ0301SJZZ	J	AG	Jack,Video/AUX/Sub Woofer
SO601	QTANA0007SJZZ	J	AF	Terminal,Speaker
⚠SO651	QSOCA0209AWZZ	J	AH	Socket,AC Power Input
SOL901(237-4)	9GD19212118	J	AP	Solenoid Ass'y
SW700	QSW-Z0001SJZZ	J	AF	Switch,Push Type [JOG]
SW709	QSW-K0002SJZZ	J	AC	Switch,Key Type [ON/STAND-BY]
SW710	QSW-K0002SJZZ	J	AC	Switch,Key Type [CLOCK/TIMER/SLEEP]
SW711	QSW-K0002SJZZ	J	AC	Switch,Key Type [TUNING UP]
SW712	QSW-K0002SJZZ	J	AC	Switch,Key Type [PLAY/CD PAUSE]
SW713	QSW-K0002SJZZ	J	AC	Switch,Key Type [VOLUME SELECT]
SW721	QSW-K0002SJZZ	J	AC	Switch,Key Type [MEMORY/SET]
SW722	QSW-K0002SJZZ	J	AC	Switch,Key Type [BASS/TREBLE]
SW723	QSW-K0002SJZZ	J	AC	Switch,Key Type [BAND]
SW724	QSW-K0002SJZZ	J	AC	Switch,Key Type [REC.PAUSE]
SW725	QSW-K0002SJZZ	J	AC	Switch,Key Type [STOP/CLEAR]
SW726	QSW-K0002SJZZ	J	AC	Switch,Key Type [TUNING DOWN]
SW727	QSW-K0002SJZZ	J	AC	Switch,Key Type [FUNCTION]
SW728	QSW-K0002SJZZ	J	AC	Switch,Key Type [VOLUME/JOG]
SW730	QSW-K0002SJZZ	J	AC	Switch,Key Type [CD Lid Open/Close]
SW802	QSW-B0001SJZZ	J	AG	Switch,Lever Type [CD Lid]
SW901(237-7)	9GD640101210	J	AE	Switch,Leaf Type [Fool Proof]
SW902(237-8)	9GD640101210	J	AE	Switch,Leaf Type [Cam]

CD MECHANISM PARTS

301	NGERH0586AFZZ	J	AC	Gear,Middle
302	NGERH0587AFZZ	J	AC	Gear,Drive
303	MLEVP1054AFZZ	J	AC	Rail,Guide
304	NSFTM0291AFFW	J	AD	Shaft,Guide
305	PCUSG0613AFZZ	J	AC	Cushion
⚠306	DCTRH8004SJ01	J	BC	Pickup Unit Ass'y
306- 1	————		—	Pickup Unit (Not Replacement Item)
306- 2	NGERR0043AFZZ	J	AC	Gear,Rack
306- 3	MSPRC0961AFZZ	J	AA	Spring,Rack
307	PCOVP1333AFSA	J	AF	Cover,Mechanism
701	XBSSD26P06000	J	AA	Screw,ø2.6×6mm

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
702	XHBSD20P05000	J	AA	Screw,ø2×5mm
703	XBBSD20P03000	J	AA	Screw,ø2×3mm
704	LX-WZ1070AFZZ	J	AA	Washer,ø1.5×ø3.8×0.25mm
NM801	RMOTV0409AFM1	J	AN	Motor with Gear [Sled]
NM802	RMOTV0408AFM3	J	AN	Motor with Chassis [Spindle]
NSW801	QSW-F9001AWZZ	J	AE	Switch,Push Type [Pickup In]

CABINET PARTS

201	CPNLC1050SJ02	J		Front Panel Ass'y
201- 1	————		—	Front Panel (Not Replacement Item)
201- 2	JKNBZ0038SJSB	J	AE	Button,Operation B
201- 3	PCOVS3004SJFW	J	AC	Shield Cover
201- 4	PCUSG0003SJZZ	J	AC	Cushion,Leg
201- 5	QCNWN0219SJZZ	J	AC	Lead Wire with Lug
201- 6	GDORF0013SJSA	J	AH	Cassette Holder
201- 7	HDECP0004SJSA	J	AG	Decoration Plate,LCD Display
201- 8	HDECP0002SJSA	J	AF	Decoration Plate, Cassette Holder
201- 9	HDECQ0028SJSA	J	AE	LCD Window
201-10	HDECQ0029SJSA	J	AE	Cassette Holder Window
201-11	JKNBZ0035SJSB	J	AF	Button,Operation A
201-12	MSPRD0006SJFJ	J	AC	Spring,Cassette Holder
201-13	LX-EZ0001SJFN	J	AB	Screw,ø2.5×10mm
203	CGERH0001SJ01	J	AF	Cassette Holder Damper Gear Ass'y
204	HDECQ0034SJSB	J	AF	Panel,CD Lid
205	LANGF0021SJFF	J	AF	Bracket,CD Lid
206	MSPRC0006SJFJ	J	AB	Spring,CD Eject Button
208	HDECQ0033SJSA	J	AD	Ring,JOG Dial Knob
209	JKNBK0025SJSB	J	AC	Knob,JOG Dial
210	GCABC1040SJSB	J	AK	Top Cabinet
212	GDORT0004SJSB	J	AK	CD Lid
214	JKNBZ0040SJSB	J	AC	Button,CD Eject
216	CHLDM1002SJ01	J	AH	Stabilizer Ass'y
216- 1	————		—	Stabilizer (Not Replacement Item)
216- 2	PMAGF0002AWZZ	J	AE	Magnet
217	GITAS0003SJSB	J	AK	Side Panel,Left
218	GITAS0004SJSB	J	AK	Side Panel,Right
221	GCABB1024SJSB	J	AG	Rear Panel
222	PCOVS3001SJFW	J	AG	Bracket,FM/AM Socket/Video/ AUX/Sub Woofer/Speaker Terminal
223	LCHSM0004SJFW	J	AN	Main Chassis
224	LANGF0023SJFW	J	AD	Bracket,Sub Transformer
225	LHLDW1001SJZZ	J	AD	Nylon Band
226	QCNWN0148SJZZ	J	AD	Lead Wire with Lug
⚠227	QFSHD0001AWZZ	J	AB	Holder,Fuse
228	LANGK0019SJFW	J	AB	Bracket,Display PWB/Main PWB
229	PRDAR0017SJFW	J	AP	Heat Sink,Power Amp. PWB
230	PRDAR0018SJFW	J	AH	Heat Sink,Main PWB
231	PCOVS3003SJFW	J	AD	Shield Cover,Main PWB
232	PSHEP0001SJZZ	J	AF	Sheet,LCD Display
233	LHLDZ1010SJSA	J	AE	Holder,LCD Display
234	LHLDZ1022SJSA	J	AB	Holder,LED
237	CMECB0004SJ01	J	BC	Tape Mechanism Ass'y
237- 1	94R19210703	J	AE	Belt,FF/REW
237- 2	9GD19210943	J	AG	Belt,Main
237- 3	94R192104309	J	AG	Pinch Roller Arm Ass'y
237- 4(SOL901)	9GD19212118	J	AP	Solenoid Ass'y
237- 5	9GD62161401	J	AN	Head,Erase
237- 6	94R62010111	J	AT	Head,Record/Playback
237- 7(SW901)	9GD640101210	J	AE	Switch,Leaf Type [Fool Proof]
237- 8(SW902)	9GD640101210	J	AE	Switch,Leaf Type [Cam]
237- 9(M901)	9GD192112344	J	AY	Motor with Pulley [Tape]
237-10(PWB-D)	9GD192121303	J	AZ	Tape Mechanism PWB Ass'y
237-11(PWB-E)	9GD192121304	J	AW	Tape Mechanism PWB Ass'y
238	QCNWN0147SJZZ	J	AC	Lead Wire with Lug
240	LHLDZ1023SJZZ	J	AD	Holder,JOG Motor
241	LHLDZ1024SJZZ	J	AC	Holder,JOG Motor Tray
242	LHLDZ1026SJZZ	J	AC	Holder,JOG Motor Guide
243	NBLTK0001SJZZ	J	AA	Belt,JOG Motor
244	NGERW0001SJZZ	J	AD	Gear,Worm,JOG Motor
245	NGERW0002SJZZ	J	AD	Wheel,JOG Worm
246	NPLYP0001SJZZ	J	AB	Pulley,JOG Motor
247	PCOVU9001SJZZ	J	AC	Sheet,JOG Motor Guide Holder
248	LANGF0011SJZZ	J	AD	Bracket,Heat Sink, Power Amp. PWB
249	LANGT0001SJFW	J	AD	Bracket,Power Amp. PWB/Main PWB
250	PCOVP1001SJSB	J	AG	Cover,Heat Sink, Power Amp. PWB
251	NPLYP0001SJZZ	J	AB	Pulley,CD Lid Motor
252	LHLDZ1031SJZZ	J	AE	Holder,CD Lid Motor
253	NBLTK0002SJZZ	J	AC	Belt,CD Lid Motor
254	NGERW0001SJZZ	J	AD	Gear,Worm,CD Lid Motor
255	NGERW0003SJZZ	J	AD	Gear,CD Lid Motor Worm Gear
256	TSPC-0113SJZZ	J	AD	Label,Specifications [For U.S.A./Central America]
256	TSPC-0114SJZZ	J		Label,Specifications [For Canada]
257	TLABN0073SJZZ	J		Label,Serial No. [For U.S.A.]
257	TLABN0074SJZZ	J		Label,Serial No. [For Canada]
258	TCAUS0002SJZZ	J	AD	Label,Caution [U.S.A. Only]
601	XEBSD25P10000	J	AA	Screw,ø2.5×10mm
603	XEBSF25P08000	J	AA	Screw,ø2.5×8mm
604	XJBSD30P08000	J	AA	Screw,ø3×8mm
605	LX-JZ0001SJFD	J	AA	Screw,ø3×10mm
608	XHBSD20P05000	J	AA	Screw,ø2×5mm
609	XEBSD25P14000	J	AA	Screw,ø2.5×14mm
610	XESSD25P12000	J	AA	Screw,ø2.5×12mm
611	XESSD30P10000	J	AA	Screw,ø3×10mm
612	XHBSD30P06000	J	AA	Screw,ø3×6mm
614	XJBSD30P10000	J	AA	Screw,ø3×10mm
615	LX-EZ0001SJFN	J	AB	Screw,ø2.5×10mm
616	XEBSF25P10000	J	AC	Screw,ø2.5×10mm
617	XHBSD40P06000	J	AA	Screw,ø4×6mm

PACKING PARTS (For Canada/Central America)

	SPAKA0043SJZZ	J	AK	Packing Add.,Left/Right
	SPAKC0104SJZZ	J		Packing Case [For Central America]
	SPAKC0137SJZZ	J		Packing Case [For Canada]
	SPAKP0002SJZZ	J	AD	Polyethylene Sheet,Unit
	SPAKP0003SJZZ	J	AC	Polyethylene Sheet, AC Power Supply Cord
	SSAKA0002SJZZ	J	AE	Polyethylene Bag,Accessories
	TLABN0073SJZZ	J		Label,Serial No. [For Central America]
	TLABN0074SJZZ	J		Label,Serial No. [For Canada]
	TLABRF239SJZZ	J		Label,Bar Code,Packing Case [For Canada]
	TLABR1096SJZZ	J		Label,Bar Code,Packing Case
	TLABZ0015SJZZ	J	AC	Label,VJ No.

ACCESSORIES

⚠	QACCD0001SJ00	J	AQ	AC Power Supply Cord
	QANTL0002SJZZ	J	AM	AM Loop Antenna
	QANTW0002SJZZ	J	AH	FM Antenna
	TINSE0039SJZZ	J	AE	Operation Manual [For U.S.A./Central America]
	TINSK0024SJZZ	J	AK	Operation Manual [For Canada]
	TINSZ0059SJZZ	J	AD	Quick Guide [For U.S.A./Central America]
	TLABM0015SJZZ	J	AD	Label,Feature
	TLABZ0038SJZZ	J	AC	Label,Saving Energy
	RRMCG0019SJSB	J	AR	Remote Control
	GFTAB1021AWSB	J		Battery Lid,Remote Control

P.W.B. ASSEMBLY (Not Replacement Item)

PWB-A1~10	DCEKL0003SJ03	J	—	Main/Display/CD/LED/ Headphones/ Open•Close Switch/ JOG Switch/Digital Out/ CD Lid/Washer (Combined Ass'y)
⚠PWB-B1,2	DCEKJ0005SJ09	J	—	Power,Power Amp. (Combined Ass'y)
PWB-C	QPWBF3895AFZZ	J	AC	CD Motor (PWB Only)
PWB-D	9GD192121303	J	—	Tape Mechanism
PWB-E	9GD192121304	J	—	Tape Mechanism

OTHER SERVICE PART

	UDSKA0004AFZZ	J	AZ	CD Pickup Lens Cleaner Disc

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION

CP-XL70U

SPEAKER BOX PARTS

701	HSY161SPK010	J	AN	Net Frame Ass'y
702	HSY094SPK020	J	AK	Speaker Box Ass'y
703	9GDHSY042SPK03	J	AH	Duct Pipe
704	PGUMM0002SJSA	J		Net Catcher
705	HDECQ0035SJSA	J		Ring,Woofer
706	9GDHSY042SPK07	J	AG	Capacitor,3.3 μF,50V
707	LX-MZ0003SJFN	J		Screw,ø4×20mm
708	LX-MZ0002SJFN	J	AH	Screw,ø3×12mm
709	HSY161SPK020	J	AD	Label,Specifications
710	9GDHSY042SPK09	J	AG	Absorber
711	9GDHSY041SPK06	J	AK	Speaker Cord A
712	9GDHSY042SPK05	J	AG	Speaker Cord B
SP601,602	VSPA010WB074N	J	AW	Speaker,Woofer
SP603,604	VSP00DMTB194N	J	AX	Speaker,Tweeter

PACKING PARTS (For Canada/Central America)

	SPAKA0047SJZZ	J		Packing Add.,Top/ Bottom,Speaker
	9GDHSY041SPK10	J	AE	Polyethylene Bag,Speaker

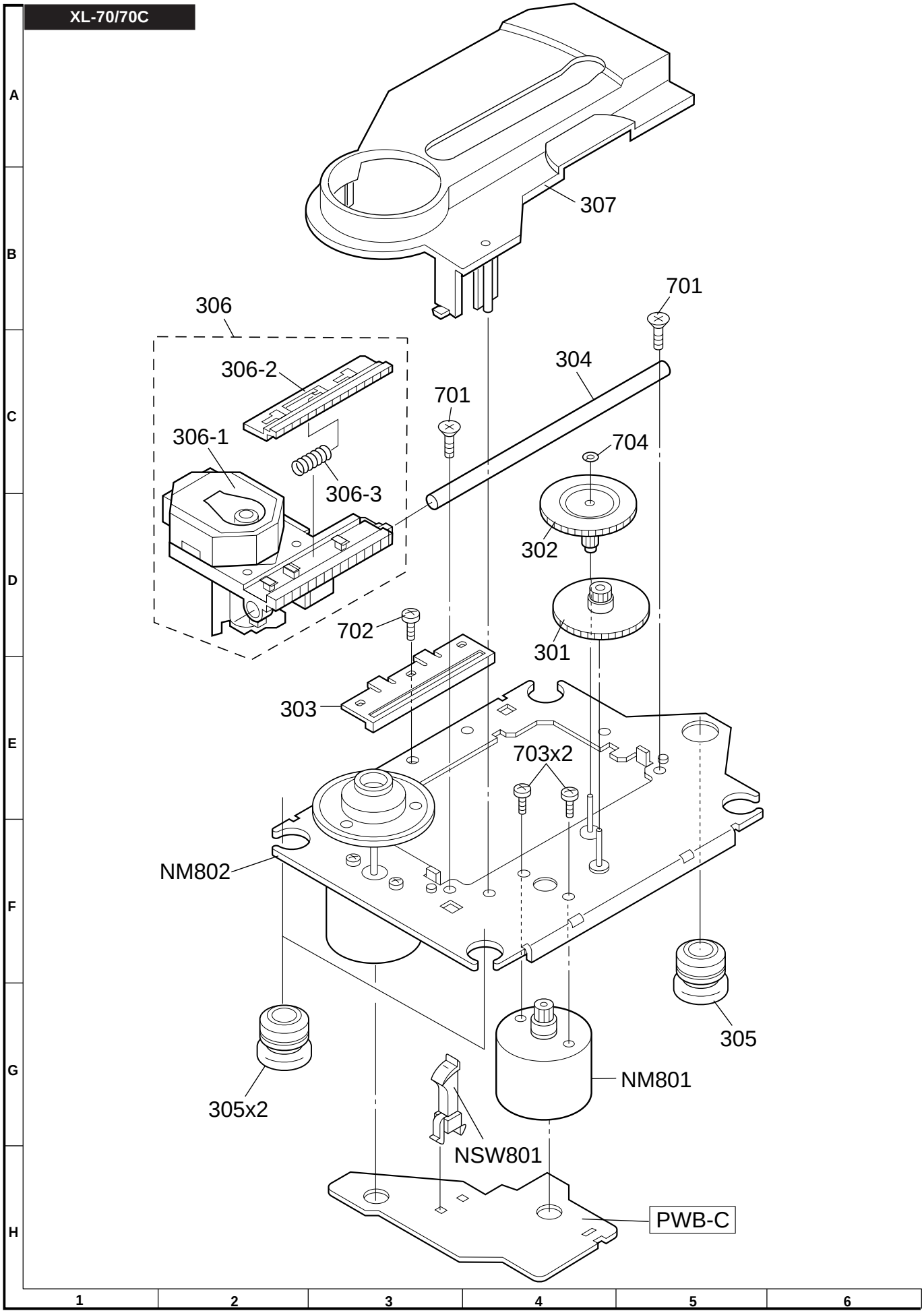
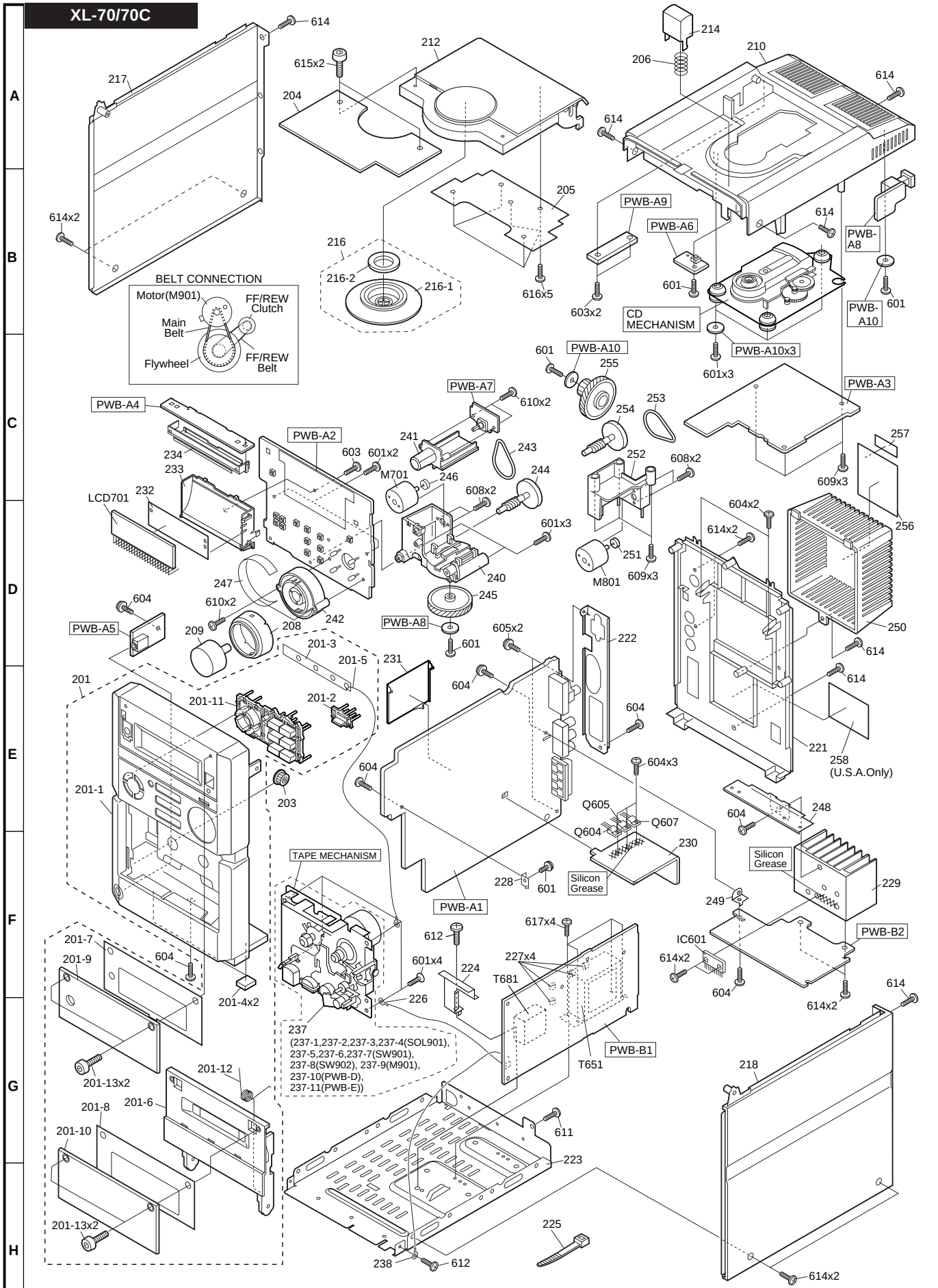


Figure 7 CD MECHANISM EXPLODED VIEW



Note: Only the unit and consumale parts are supplied as parts supply for the Tape mechanism.

Figure 8 CABINET EXPLODED VIEW

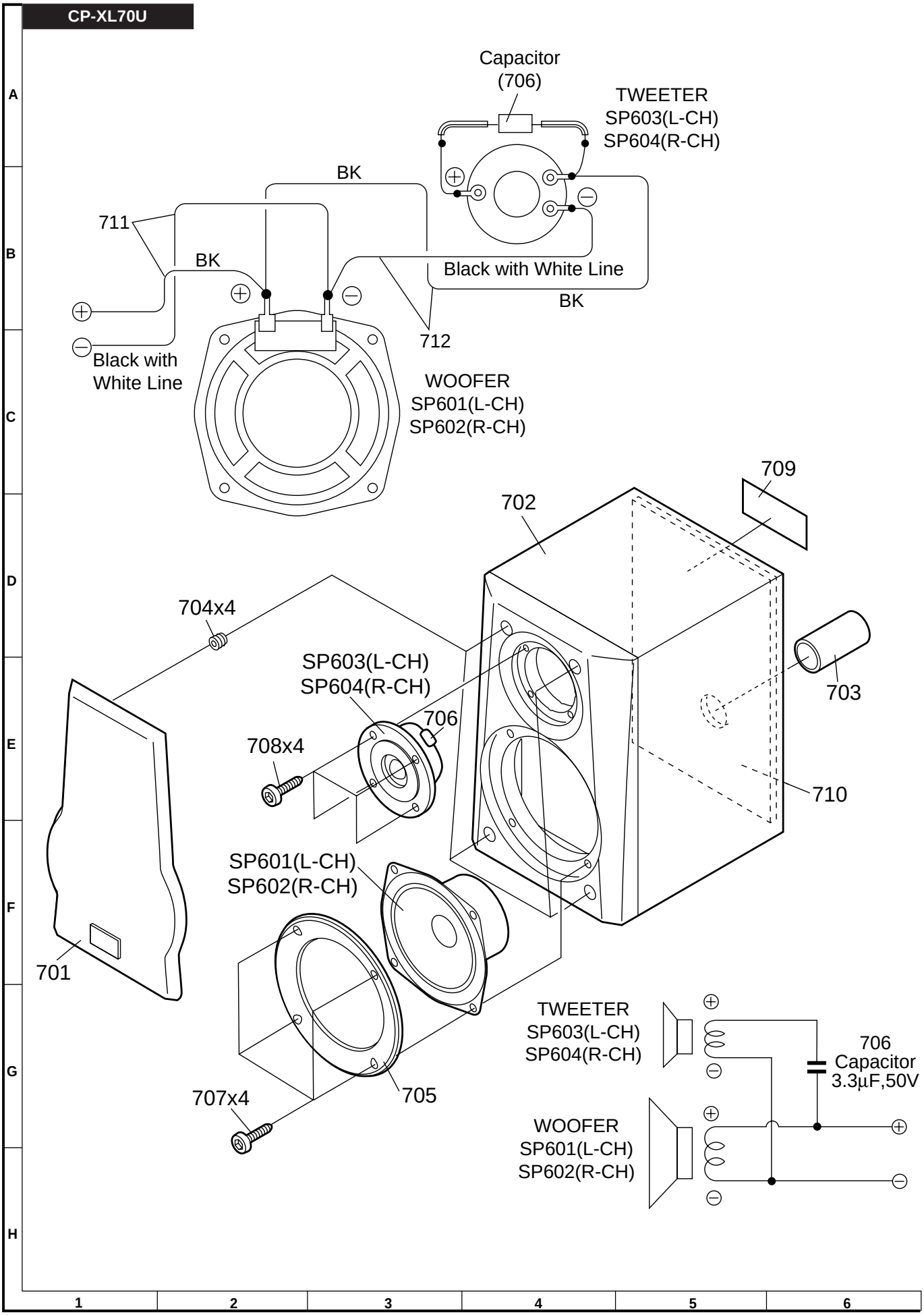
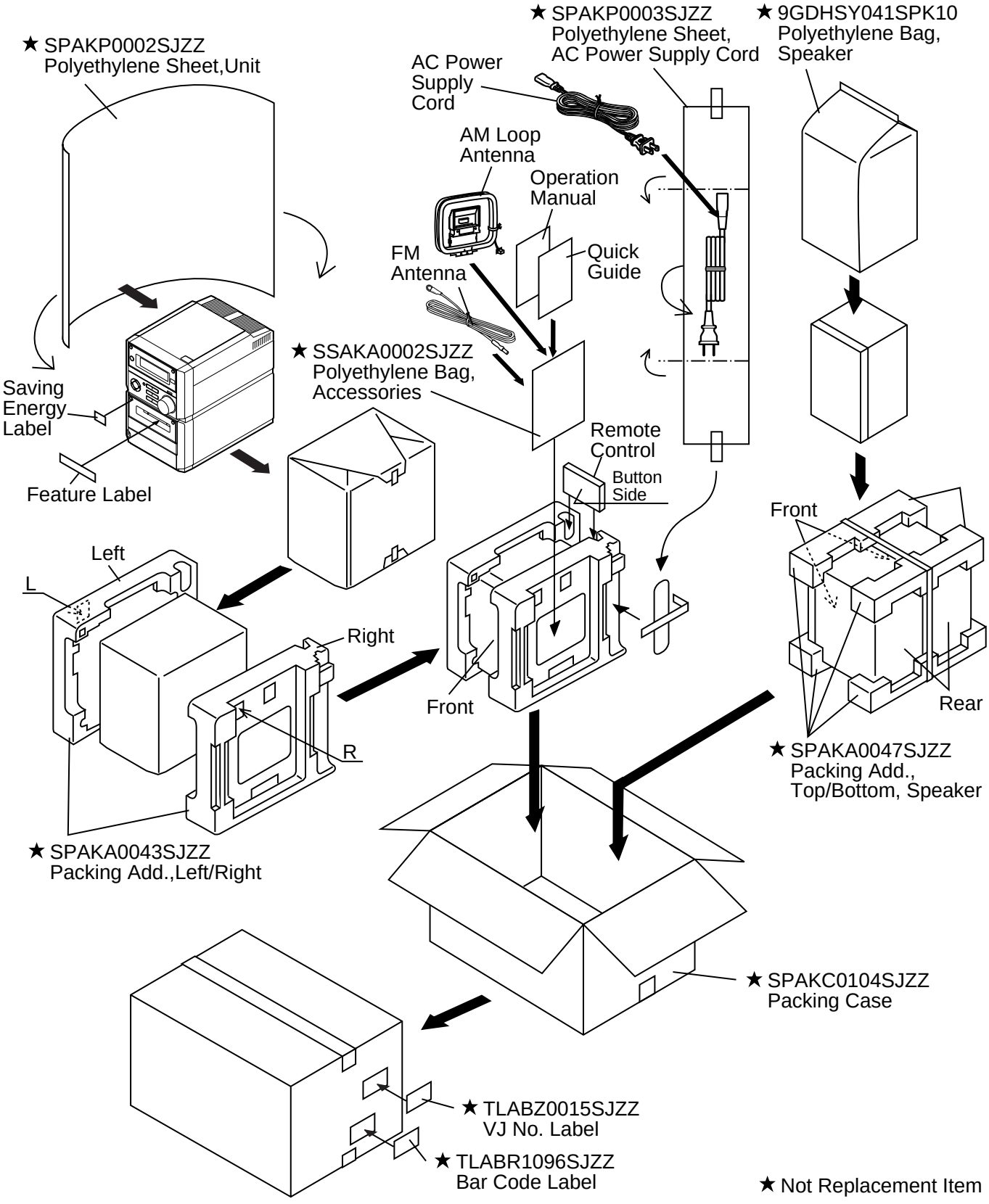


Figure 9 SPEAKER EXPLODED VIEW

PACKING OF THE SET (FOR U.S.A. ONLY)

Setting position of switches and knobs	
Tape Mechanism	STOP
Cassette Holder	CLOSE
CD Lid	CLOSE



SHARP

COPYRIGHT © 2000 BY SHARP CORPORATION

ALL RIGHTS RESERVED.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any from or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission of the publisher.

SHARP CORPORATION
Communication Systems Group
Quality & Reliability Control Center
Higashihiroshima, Hiroshima 739-0192, Japan

Printed in Japan

A0005-2625DS•HA•C

SC • SL • LAG